MPEG4 DIGITAL VIDEO RECORDER

User's Manual

MPEG COMPRESSION

4 CHANNEL

8/16 CHANNEL

USB

REMOTE CONTROL

HARD DISK DRIVE

AUDIO REC

VGA VGA OUTPUT

DVD R/RW

COMPACT disc ReWritable

Thank you for using our product.

1. This is user's manual for High-end 4CH, 8CH and 16CH DVR (Digital Video Recorder).

2. This manual contains product specification and introduction, installation guide, operating guide and other necessary matters for easy understanding. Users should read this user's manual carefully for proper use.

3. Contents in this manual may be changed according to the specification change and feature improvement without any notification.

4. This user's manual shall never be copied without prior agreement and violating this may be a reason for legal punishment on piracy.

5. If there is any incorrect or insufficient content in this user's manual, notify it to Customer Support Center.

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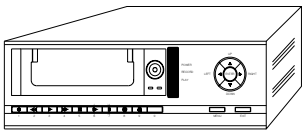
CH1. Product Introduction

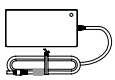
1-1. Product Contents

<4CH>

After removing packing materials of this product, check whether all following contents are included.



Main Body (DVR):
This converts the analog video and audio signal to the digital signal and saves on HDD.



Adapter:
This 12V adapter supplies power to the product.

Power Cable:
This connect the adapter and the power source.

Program CD:
This contains the User's manual and Client Program for DVR.

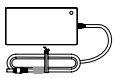
Remote Controller:
This is an IR remote controller for convenience.

Battery:
These are 2(two) AA size battery for the remote controller.

<8 and 16 CH>

After removing packing materials of this product, check whether all following contents are included.

Main Body (DVR):
This converts the analog video and audio signal to the digital signal and saves on HDD.



Adapter:
This 12V adapter supplies power to the product.

Power Cable:
This connect the adapter and the power source.

Program CD:
This contains the User's manual and Client Program for DVR.

Remote Controller:
This is an IR remote controller for convenience.

Battery:
These are 2(two) AA size battery for the remote controller.

1-2. Specifications

<4CH>

Image Input/Output : NTSC / PAL
Recording Speed :
NTSC - 1~123fps(based on 360X240)
PAL - 1~103fps(based on 360X288)
Compression Method : MPEG4 Technology
Recording Time : 48~17,780 hours (160G)
Power : DC12V, 4.5A (DC adapter)
Power Consumption : 34W
External Terminal : Video Input - BNC 4CH
Video Output - BNC 1CH, S-Video 1CH, VGA 1CH(optional)
Spot Out- BNC 1CH
Loop Out - Loop Through 4CH
Audio Input - RCA 4CH
Audio Output - RCA 1CH
Sensor Input - Terminal Block 4CH (Contact, TTL)
Sensor Output - Terminal Block 4CH (Dry Contact)
LAN Communication - RJ45 Port
Serial Communication - DSUB9(RS-232C)
Terminal Block(RS485)
USB 1.1 Type A
Temperature : 5~40℃(30~110 F)
Humidity : 20%~80%(Non-condensing)
Size : 277 (W) × 315 (D) × 80 (H) mm
Weight : Lighter than 4.5Kg(Supplements and Packing Materials Excluded)
Supplements : Adapter 1
Power Cable 1
Program CD 1
Remote Controller 1
Battery 2

<8CH / 16CH>

Image Input/Output : NTSC / PAL

Recording Speed :

NTSC -1~127(8ch), 1~135fps(16ch) : based on 360X240

PAL - 1~107(8ch), 1~115fps(16ch) : based on 360X288

Compression Method : MPEG4 Technology

Recording Time : 44~17,780 hours (160G, 16ch)

47~17,780 hours (160G, 8ch)

Power : DC12V, 8A (DC adapter)

Power Consumption : 96W

External Terminal : Video Input - BNC 8CH / 16CH

Video Output - BNC 1CH, S-Video 1CH, VGA 1CH

Spot Out- BNC 1CH

Loop Out - Loop Through 8CH / 16CH

Audio Input - RCA 4CH

Audio Output - RCA 1CH

Sensor Input - Terminal Block 8CH (Contact, TTL) / 16CH (Contact, TTL)

Sensor Output - Terminal Block 8CH (Dry Contact 4CH) / 12CH (Dry Contact 4CH)

LAN Communication - RJ45 Port

Serial Communication - DSUB9(RS-232C)

Terminal Block(RS485)

USB 1.1 Type A

Temperature : 5~40℃(30~110 F)

Humidity : 20%~80%(Non-condensing)

Size : 430 (W) × 420 (D) × 88 (H) mm

Weight : Lighter than 5.5Kg(Supplements and Packing Materials Excluded)

Supplements : Adapter 1

Power Cable 1

Program CD 1

Remote Controller 1

Battery 2

1-3. Product Characteristics

1) High quality picture
This enables recording and playing high quality digital image based on MPEG4 compression method.

2) High reliability
With Embedded hardware and software design, this maintains higher product reliability compared to common PC type products.

3) Simple usage
This allows users to use it conveniently by placing control buttons similar to existing ones on VCR, and users can easily learn the usage.

4) Triplex System
Triplex System allows recording, backup, networking and playback simultaneously.

5) Selectable recording setup
For recording methods, users can select the frame rate, resolution and video quality individually in order to be appropriate for user's environment.

6) Remote monitoring
With using exclusive line or Internet network, you can search or monitor recorded images remotely by installing exclusive client program on PC.

7) Backup
You can backup with USB, CD-RW and DVD-RW.

8) Audio recording
You can record four sound inputs simultaneously. Moreover, you can listen to the sound in search and live monitoring and play mode.

9) Various recording methods
This provides convenient use with manual recording, recording by dates and days, hourly schedule recording, sensor and motion detection event recording and others to enable unmanned monitoring.

10) Various total monitoring features
You can use overall and economical security system through various sensor inputs and contact output control.

11) Display information in easy-to-understand information method
This enhanced convenience of user by displaying information (date, time, recording method, recording frame number, HDD capacity and others) in monitoring, recording and playing mode in easy-to-understand way.

12) Spot monitoring
Spot out can be enable to monitor sequentially in other place.

13) P/T/Z control
By built in RS485, various P/T/Z cameras can be used.

14) Individual resolution setting
You can record in each channel by choosing 360X240, 720X240 and 720X480 individually.

15) Separate video transmission engine
DVR can send 60 fps (based on CIF) regardless of the local recording and viewing setup regardless with recording setup.

16) Web browser support
You can monitor and playback the video and control the PTZ camera by internet explorer.

17) Built in S.M.A.R.T.
You can automatically check the health of the hard disk drives.

18) Text inserter
You can operate with the POS and ATM.

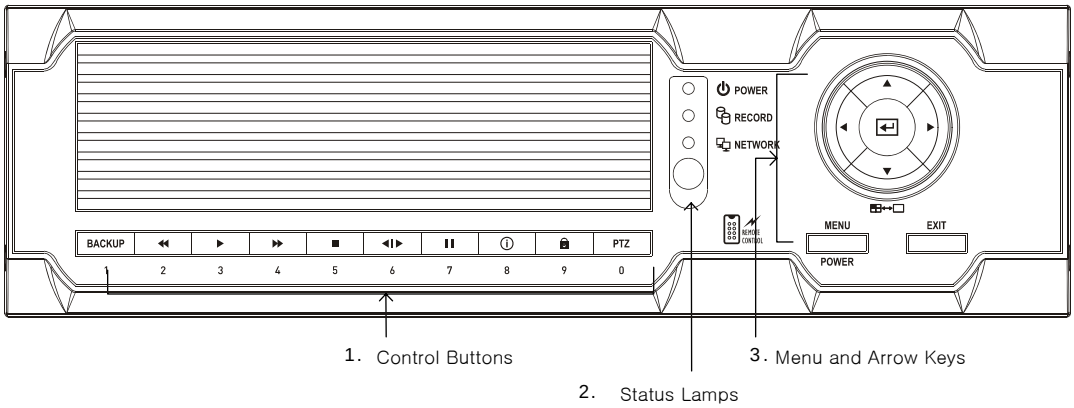
19) Mirroring
If you install more than two HDDs, you can use the second HDD for backup for maximum fault tolerance.

20) Language pack
Basically DVR has 5 language set, furthermore you can choose the language set if you want.

1-4. Name of Each Part

1-4-1. 4CH

[Front Panel]



1. Control Button : Record, Search, Lock feature.
   (※ In menu and password setting, it is automatically converted to number buttons)

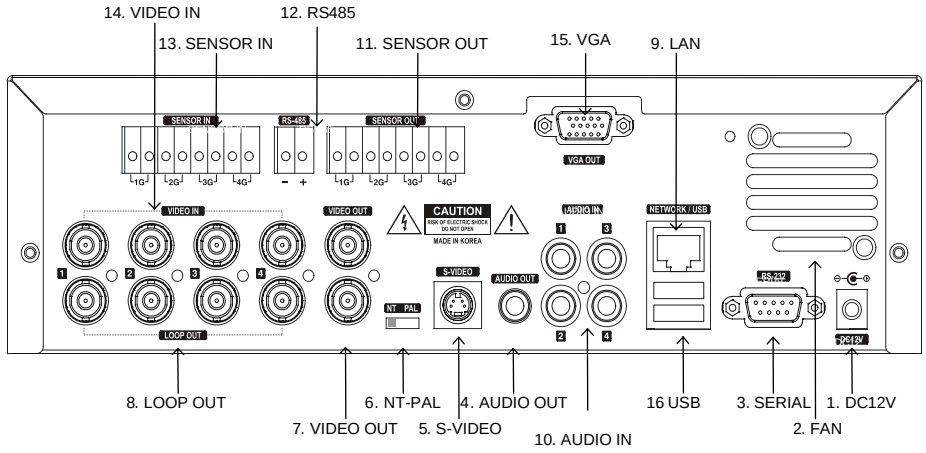
No.	Display	Live mode	Search Mode	Menu setting
1	Backup	Backup		No.”1”
2	REW		Rewind	No.”2”
3	PLAY	Search	playback	No.”3”
4	FF		Fast Forward	No.”4”
5	STOP		Stop/	No.”5”
6	SLOW		Slow playback	No.”6”
7	STILL	Instant Replay	Pause/ Step	No.”7”
8	INFO	Information		No.”8”
9	LOCK	System Lock	Protect File	No.”9”
0	PTZ	PTZ		No.”0”

2. Status lamps
   POWER : Green. Power indicator.
   RECORD : Red. Indicate the recording.
   NETWORK : Green. Lit on connecting the network

3. MENU and ARROW Keys
   This button is used to change settings for the product in MENU Mode or used in Search Mode or turn it on.

※ For more details, refer to [CH 3. How to Use]

[Rear Panel]

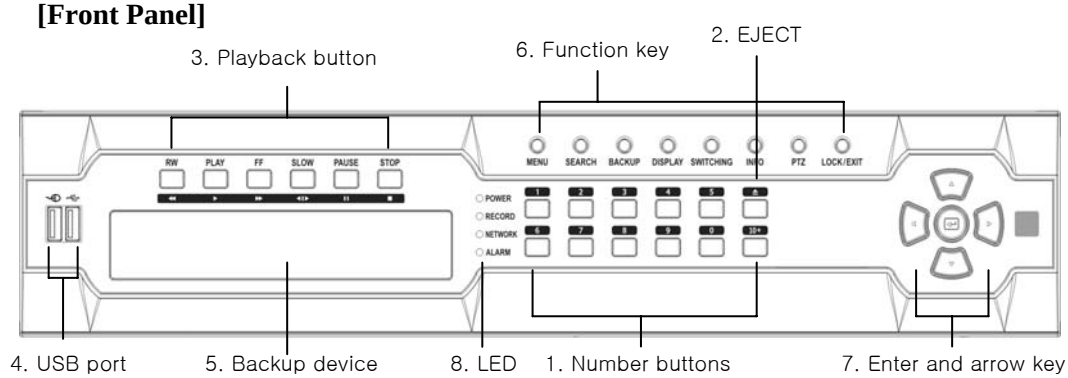


1. DC Power : DC12V 4.5A
2. Cooling Fan
3. Serial Port: This is Serial communication(RS-232C) cable connection terminal.
4. Audio Out: RCA audio out terminal.
5. S-Video Out : Output for S-Video monitor. Normally you can get clearer image than BNC.
6. NTSC/PAL select switch : Choose the proper position.
7. Video Out : For main monitor.
8. Loop Out : This sends the images from the cameras the other devices.
9. LAN Port: This is LAN cable connection terminal.
10. Audio In: RCA audio in terminals. You can record four channels at the same time.
11. Sensor out : This terminal blocks connect external electric devices to the product (Warning Lamp and others).
12. RS485 port : For control the pan and tile cameras. Make sure that the polarity.
13. Sensor In : This terminal connects external sensor to the product.
14. Video In: This receives images from cameras and sends them to monitors.
15. VGA port: video output for VGA display
16. USB ports : This port is for USB device.

※ For more details, refer to [CH 2. Installation Method and Cautions].

1-4-2. 8 and 16CH

[Front Panel]



1. Number buttons : If you push this button, it will be changed to full screen in live viewing or playback
(※ In menu and password setting, it is automatically converted to number buttons)

2. EJECT : It will open or close the backup drive such as CD-RW or DVD.

3. Playback buttons : It will be used on playback. If you push these buttons in live mode, it will be automatically changed to the Instant Play mode. 'Stop' button changes from the play mode to the live mode.

4. USB ports : These USB ports are for mouse and USB devices. You should connect correctly the USB devices and mouse as picture directed.

5. Backup device : You can use the versatile backup devices such as CD-RW and DVD-RW.

6. Function keys

1) Search : It will change to the playback mode from the live mode.
2) Backup : It will move to the backup screen from the live or play mode.
3) PTZ : It will change to the pan, tilt and zoom control mode from the live mode.
4) MENU : It will move to the setup screen from the live mode.
5) DISPLAY : It will change the screen splitting sequentially from 1, 4, 6, 9, 13 and 16. It can be adapted both live and play mode.
6) SWITCHING : It will change to switching mode except 16 splitting.
7) INFO : It will turn it on and off the GUI and OSD sequentially.
8) EXIT(LOCK) : If you want move to the upper menu or exit without saving, push this button. On playback, it will disappear the search list for the better viewing. On live viewing, it performs the system lock.

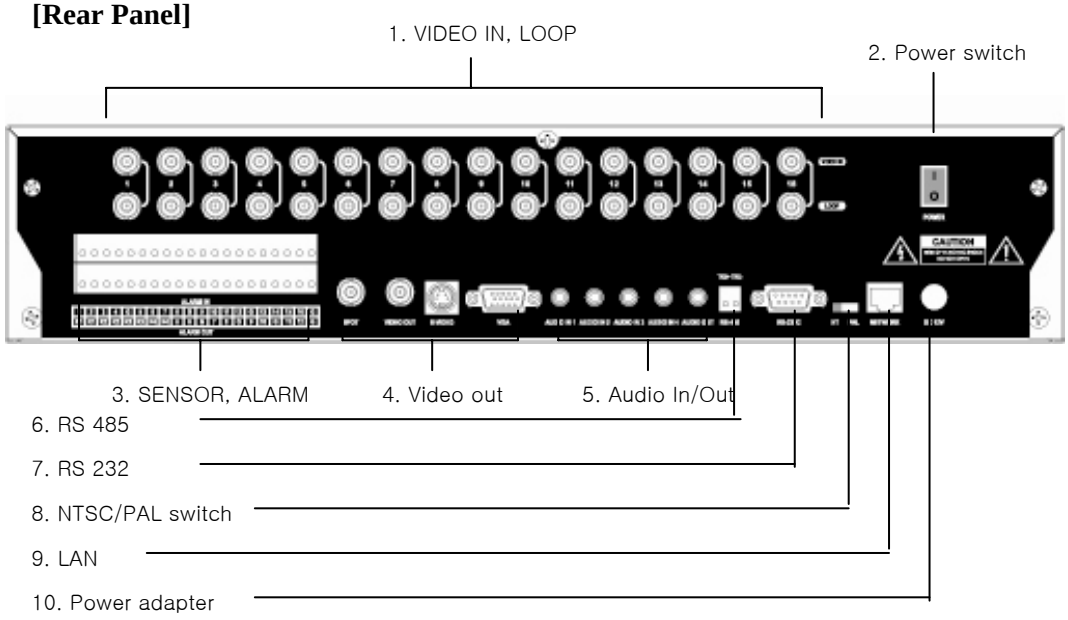
7. ARROW, ENTER : This button is used to change settings for the product in MENU Mode or used in Search Mode.

8. Status LED

POWER : Blue. Power indicator.
RECORD : Red. It will be lit on while recording.
NETWORK : Green. It will be lit on while connecting the network.
ALARM : Red. It will be lit on when the events happen.

※ For more details, refer to [CH 3. How to Use]

[Rear Panel]



1. VIDEO IN : This receives images from cameras and sends them to monitors.
LOOP : This sends the images from the cameras to the other devices.

2. POWER : This turn it on and off the main power.

3. SENSOR IN : This terminal connects external sensor to the product.
ALARM OUT : This terminal blocks connect external electric devices to the product (Warning Lamp and others). The first 8 terminals are related with dry contacts (4 relays).

4. VIDEO OUT : There are four kinds of video out such as composite, spot, S-VIDEO, and analog RGB(VGA).
5. AUDIO IN : RCA audio in terminals.
You can record four channels at the same time.
AUDIO OUT : RCA audio out terminal.

6. RS485 port : For control the pan and tile cameras. Make sure that the polarity.
7. SERIAL : This is Serial communication(RS232C) cable connection terminal.
8. NTSC/PAL select switch : Choose the proper position along your video format.
9. LAN Port: This is LAN cable connection terminal.
10. DC Power : DC12V 8A.
※ For more details, refer to [CH 2. Installation Method and Cautions].

CH2. Installation Method and Cautions

2-1. Cautions

- Avoid installing the product where there are direct rays or it is hot by locating near from heat generator. (May cause fire)

- Do not put vase, flowerpot, cup, cosmetics, drug, and anything the contain water on product. (May cause fire or electric shock, and it may injure people by falling)

- Do not insert or drop any metal object (coin, hair pin) or flammable object (match, paper) into air hole. (May cause fire or electric shock)

- Do not put any heavy object on it. (May injure people by being fell or destroyed.)

- Put power plug surely not to be moved. (If not, this may cause fire.)

- Unplug power plug and antenna when there are thunders and lightening. (May cause fire.)

- For cleaning the product, wipe surface with dry towel. Using chemical agent or cleaner may change the color and unpeel paint. Do not put several plugs at same time. (May cause electric shock.) If there is smoke or strange smell, stop operation. In this case, turn the power off and unplug it, and then contact our service center. (If you keep using it, this may cause fire or electric shock.)

- Do not unplug by pulling cord. (If cord is damaged, it may cause fire or electric shock.)

- Do not plug or unplug with wet hands. (May cause electric shock.)

- Keep the power cord untwisted. (May cause fire or electric shock.)

- Use proper adapter. (Using too much electric power may cause fire or electric shock.)

- Do not install it at where exposed to rain and wind and water drop. (May cause fire, electric shock and transformation.)

- Keep away from fire. (May cause fire.)

-Do not disassemble or remodel on your own. (May cause malfunction or electric shock.)

- Do not put next to flammable materials like flammable spray. (May cause fire.)

- Do not install it at a place with too much dirt. (May cause fire.)

- Do not install it on unstable places like shaking table and inclined place or shaking place. (May injure users by falling down or being upside down.)

- Do not put an heavy object on power cord or avoid it from being pushed by the device. (May cause fire or electric shock.)

- In case of using extension cord, do not use several devices at same time. (May cause fire with abnormal heating of extension.)

- When there are dirt on power plug pin or power outlet, clean it nicely. (May cause fire.)

-Do not damage on power cord or plug, and bend or twist or pull too much, and put it between other objects or heat. If power outlet insertion part is not tight, do not use it. (May cause fire or electric shock.)

-Do not drop or give a shock to the product. (May injure people or cause malfunction.)

- Do not touch power adaptor or signal controller. (May cause electric shock.)

- Do not put any object too close to block cooling fan. (May cause fire.)

- In case of exchanging batteries with improper type, there might be danger of explosion.

- For used batteries, throw away separately from other garbage.

- When you take out batteries, avoid children from eating them by mistake. Keep them away from children. (If a child ate them, contact a doctor right away.)

Note :
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with the part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations.

FCC Warning :
This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

CE Warning : This is a Class A product. In a domestic environment this may cause radio interference in which case the user may be required to take adequate measures.

This product has obtained EMI registration.

2-2 Product Installation

This product may be composed of camera and monitor in default, and additionally the sensor, microphone, speaker and PC for network can be connected if necessary.

2-2-1. Power Connection

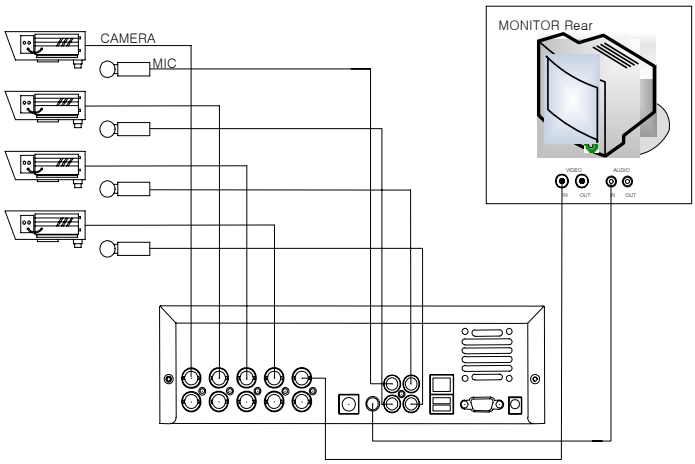
1) Connect adapter cable to power connection terminal at rear side.
2) Input AC power to the adapter. (free voltage from 100V to 240V, 50/60Hz)

※ You must operate it at the rated voltage instructed on the user's manual. In case power higher than the rated voltage is supplied, it may cause damages on product.

2-2-2. Connecting External Device (4CH)

※ Connect it when power of the product is off.
※ Read through user's manual for the device you are connecting carefully.

1) How to Connect External Video/Audio Device



Connect cameras to VIDEO IN by channels.
Connect microphone (AMP) to AUDIO IN by channels.
Connect VIDEO OUT to VIDEO IN of monitor.
Connect AUDIO OUT to AUDIO IN of monitor.

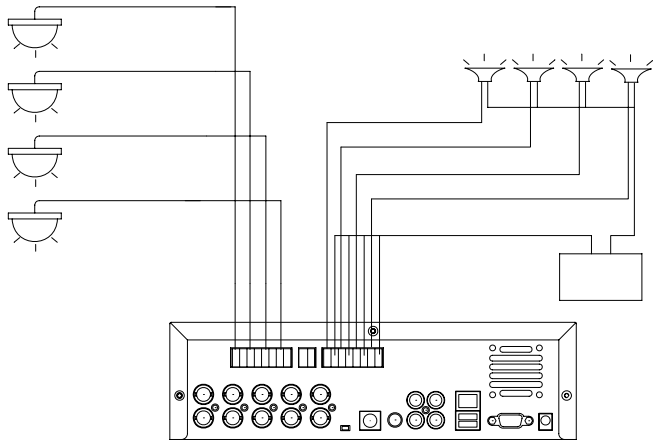
For Loop Out terminal at rear side, you can use it by connecting to the other external device such as matrix which needs the camera input.

2) How to connect external sensor

Sensor terminal is composed of 4 input channels and 4 output channels. As shown at below, if sensor output is TTL signal, connect SIGNAL line to left and GND line to right by input channels.

***What are N/O (Normal Open), N/C (Normal Close)?**

This is a terminology explaining operation method of Sensor. N/O Sensor is that contact maintains Open status in normal condition and contact is converted to Close status with beginning operation. Oppositely, N/C Sensor operates while contact maintaining Close status converts to Open status.

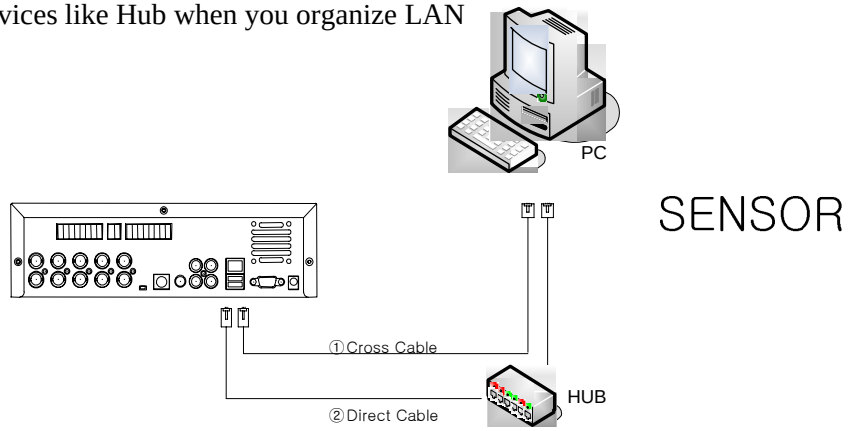


Sensor In : Connect the sensors.
Sensor Out : Connect the external electric devices.

3) Connecting with PC using LAN cable

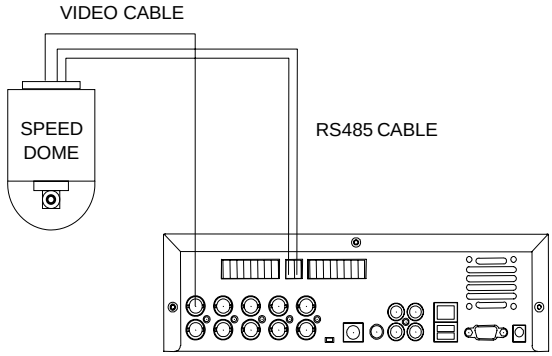
If you want to connect DVR to PC directly, use Cross Cable(1), and if you want to use HUB, use Direct Cable(2).

*Hub : This is a device connecting one office to devices located near with using cable when you organize LAN
*Direct Cable : This is standard UTP cable used for communication among devices through Hub and others when you organize LAN
*Cross Cable : This is a cable that has changed internal array of standard UTP Cable for direct communication among devices not using connection devices like Hub when you organize LAN



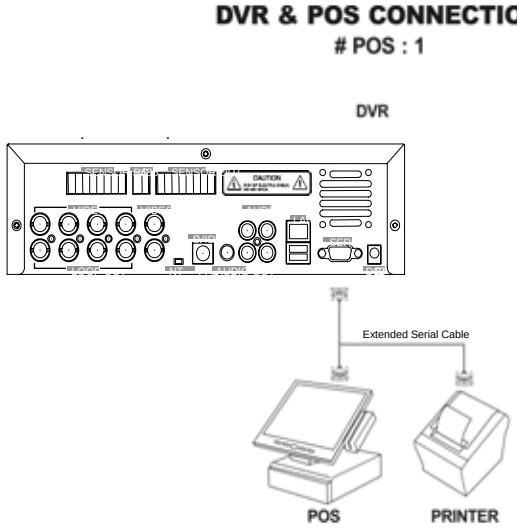
4) Connection Using PTZ camera

In case of using pan and tilt cameras, connect PAN/TILT DRIVE to product as shown at following figure.



5) Connection with POS or ATM

In case of operating with POS or ATM , connect POS or ATM to product using the expanded serial cable as shown at following figure.



6) Installing Hard disk drive

In case of installing the hard disk drive, open the upper case and install the hard disk drive on the hard bracket. If you use the one hard disk drive, it should be set the IDE1 with master setting. If you use the 2 hard disk drives, it also should be set the IDE1 with 1 master and 1 slave setting. Remember that the main power should be off to install the hard disk drive. If you have any trouble, please contact the technical support.

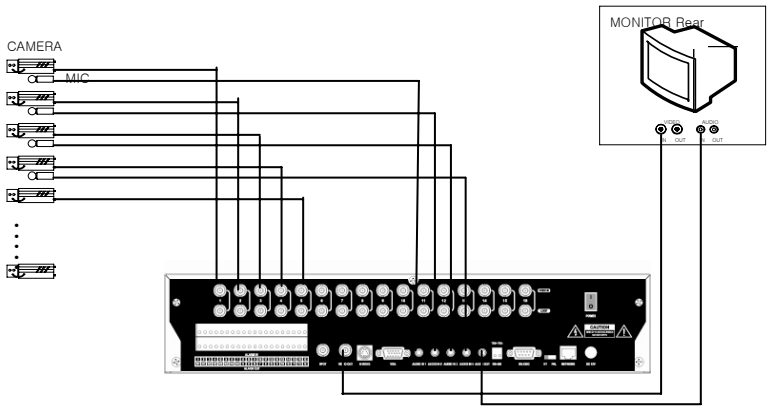
7) Installing backup drive

You can use the DVD-RW or CD-RW for backup. In this case you can install just one hard disk drive. To install the backup drive, open the top cover and install the backup drive on the bracket. It should be connected to IDE 2 with slave setting.

2-1-3. Connecting External Device(8 and 16 CH)

※ Connect it when power of the product is off.
※ Read through user's manual for the device you are connecting carefully.

1) How to Connect External Video/Audio Device



Connect cameras to VIDEO IN by channels.
Connect microphone (AMP) to AUDIO IN by channels.
Connect VIDEO OUT to VIDEO IN of monitor.
Connect AUDIO OUT to AUDIO IN of monitor.

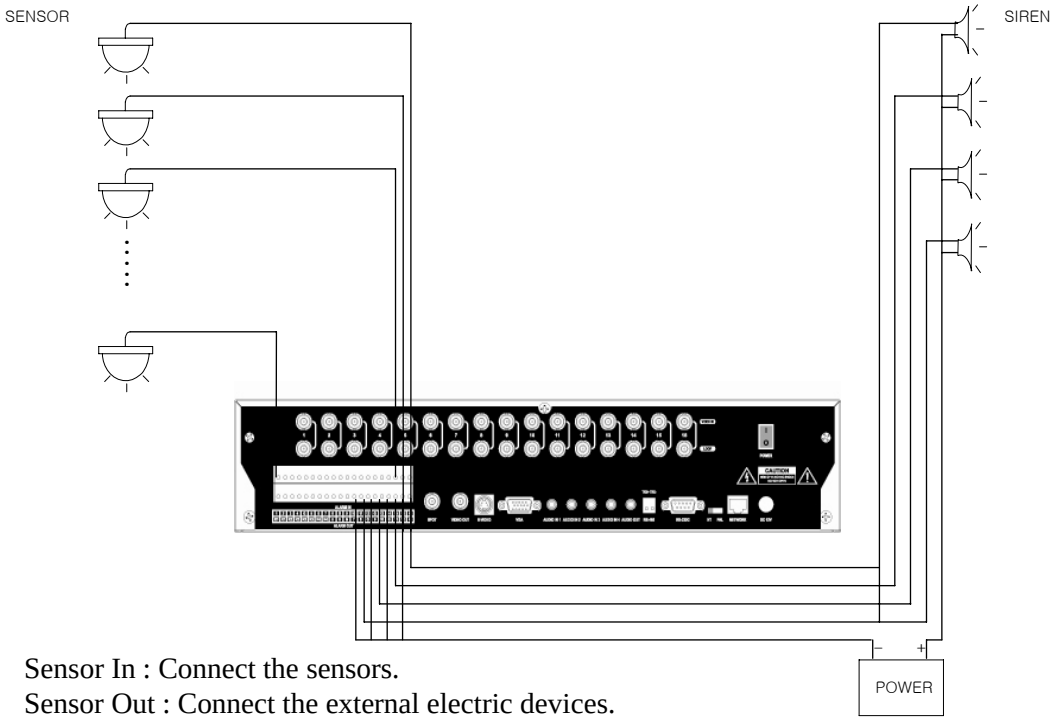
For Loop Out terminal at rear side, you can use it by connecting to the other external device such as matrix which needs the camera input.

2) How to connect external sensor

Sensor terminal is composed of 16 input channels and 12 output (4 relays, 8 TTLs) c hannels. As it shown as it below, if sensor output is TTL signal, connect SIGNAL li ne to left and GND line to right by input channels.

*What are N/O (Normal Open), N/C (Normal Close)?

This is a terminology explaining operation method of Sensor. N/O Sensor is that contact maintains Open status in normal condition and contact is converted to Close status with beginning operation. Oppositely, N/C Sensor operates while contact maintaining Close status converts to Open status.

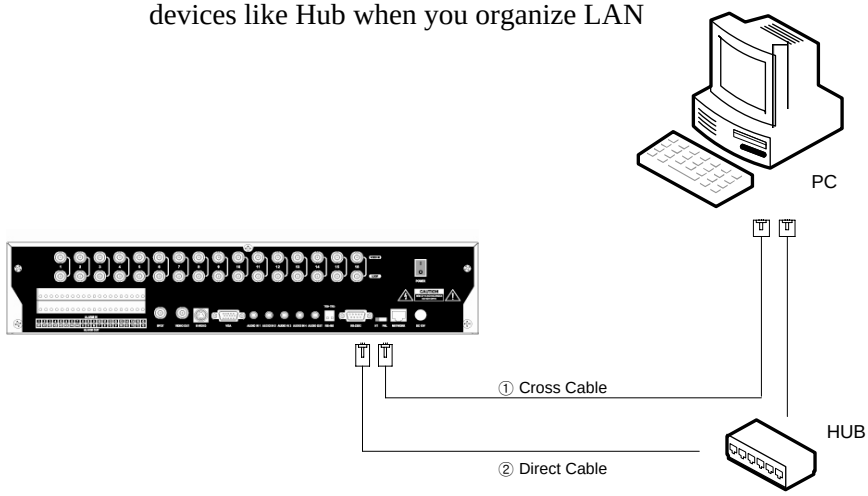


Sensor In : Connect the sensors.
Sensor Out : Connect the external electric devices.

3) Connecting with PC using LAN cable

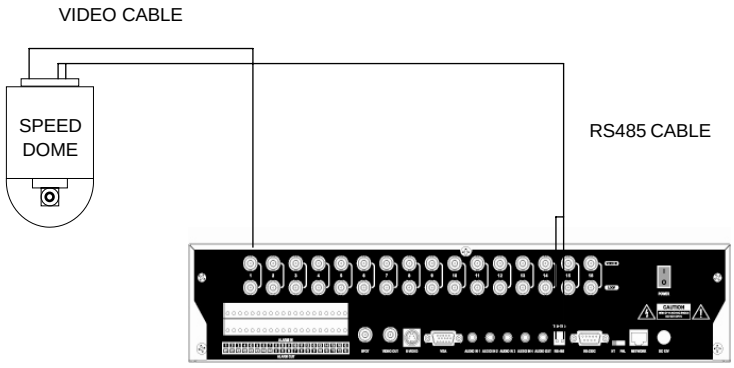
If you want to connect DVR to PC directly, use Cross Cable(1), and if you want to use HUB, use Direct Cable(2).

*Hub : This is a device connecting one office to devices located near with using cable when you organize LAN
*Direct Cable : This is standard UTP cable used for communication among devices through Hub and others when you organize LAN
*Cross Cable : This is a cable that has changed internal array of standard UTP Cable for direct communication among devices not using connection devices like Hub when you organize LAN



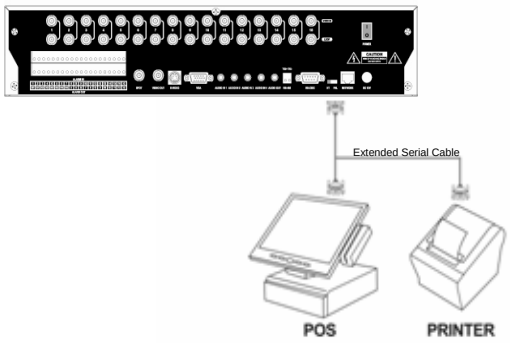
4) Connection Using PTZ camera

In case of using pan and tilt cameras, connect PAN/TILT DRIVE to product as shown at following figure.



5) Connection with POS or ATM

In case of operating with POS or ATM , connect POS or ATM to product using the expanded serial cable as shown at following figure.



6) Installing Hard disk drive

In case of installing the hard disk drive, open the upper case and install the hard disk drive on the hard bracket. If you use the one hard disk drive, it should be set the IDE1 with master setting. If you use the 2 hard disk drives, it also should be set the IDE1 with 1 master and 1 slave setting. If you use the 3rd and 4th hard disk drive, it should be connected with the secondary master and slave setting. Remember that the main power should be off to install the hard disk drive. If you have any trouble, please contact the technical support.

7) Installing backup drive

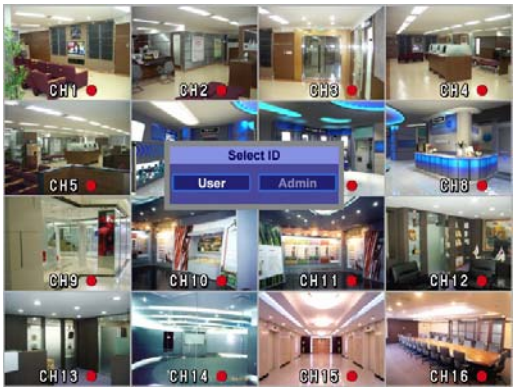
You can use the DVD-RW or CD-RW for backup. In this case you can install just one hard disk drive. To install the backup drive, open the top cover and install the backup drive on the bracket. It **SHOULD be connected to IDE 2 with slave setting.**

CH3. How to Use

3-1. LIVE Screen

If you turn on power after completing installation, 16 splitting screen is shown on the monitor in real time as following.

※ When the system is locked, the Select ID window appears. If you log in with User mode, you can only operate with live and playback. So if you want to operate with whole function, you should log in with Admin mode. On logging, the Password check window appears. Type the right password to unlock the system. The factory default password is just blank. So push the 'enter' button at first DVR using to go to the menu.

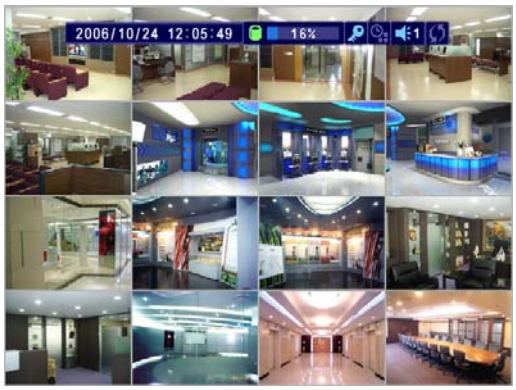


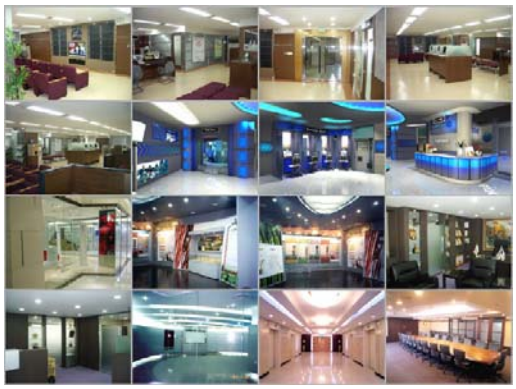
※ You can operate the DVR with buttons, remote controller and mouse. This chapter is written based on the buttons and remote controller. Refer to [CH4 Operation with Mouse] if you install the mouse.

3-1-1. INFORMATION Feature

This feature shows current settings of product through GUI (Graphic User Interface) and INFO button at front side is used for this feature. When you turn on power, this will show current date and time, System Lock Setting, HDD usage, Video Loss Check, Sensor ON/OFF, Motion Detection Check, Recording Stat us and Schedule Feature Usage. As you push INFO button once more, GUI disappear->OSD disappear->GUI appear->OSD appear will happen sequentially.

※ GUI (Graphic User Interface): displaying current status on monitor as images
※ OSD (On Screen Display): displaying current status on monitor as character



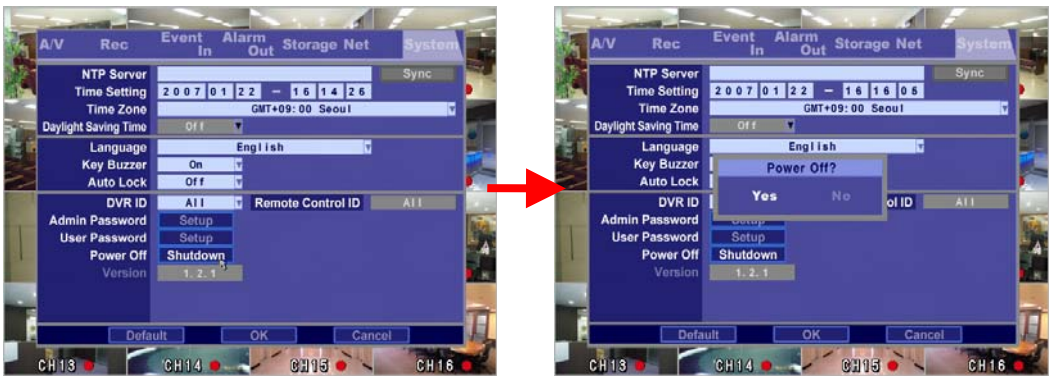


▶ Live Screen GUI

2005 / 10 / 26	Date (e.g.: yyyy/ mm/dd)
23 : 19 : 05	time
100%	HDD usage
/ /	Lock up/ Administrator Log in/ User Log in
/	Scheduler OFF/ON
	Video Loss
	Sensor On/Off
	Motion detection
	Text In
	Recording ON
/	Channel switching OFF/ON
/	Sound On and selected channel / Mute

3-1-2. Power off

When you turn it off, push the 'Menu' button and go to the 'System' and then choose the 'Power Off' . After confirming power off, DVR will shut down.
Please should follow the procedure on turning it off. It is possible to make a trouble not to follow the instruction.



• WARNING!

This power off is soft power. It means there is a still electric current after power off. If you try to change the HDD from the DVR, you SHOULD Turn it off the main power switch behind the product before changing HDD.

3-1-3. Display mode change

You can change the display mode using the 'Display' button in front of the DVR. If you simply enlarge certain channel to the full screen, use the 1~10+ buttons. From 1 to 10, push the related button and over 10, use the 10+ and 1~6 buttons sequentially. As you push the 'Display' button, the screen changes sequentially from 1, 4, 6, 8, 9, 13 and 16 splitting mode.
Use the up , down key to change to the different channel set in the splitting mode.
If you push the 'Switching' button, it will be changed to automatic switching mode.

3-1-4. PTZ (Pan, Tilt and Zoom)

It is possible to control the pan and tilt camera by itself. Push the 'PTZ' button to enter the PTZ mode. For Menu setting, you can set it by pushing button as displayed at bottom of window.

1) You can set the direction of camera by using the arrow buttons.
2) Setup : If you push Menu button in PTZ Menu, camera setup window will appear.

Driver: Choose Driver to be suitable for PAN/TILT Camera manufacturer.
You have to set Comport value according to the connected camera.

	BitRate	Parity	DataBit	Stop
PELCO D type	9600~2400	NONE	8	1
PELCO P type	2400	NONE	8	1
PANASONIC	2400~19200	NONE	8	1
ORIENTAL	2400(Fixed)	NONE	8	1
LPT-A100L	9600(Fixed)	NONE	8	1
LG-SD110	2400~19200	NONE	8	1

Function: This is a value setting camera moving speed. You can select within 1~7. As this value gets higher, speed gets faster. You may not be able to change camera speed according to camera kinds.

- PAN Speed: This is Left/Right Camera moving speed.
- Tilt Speed: This is Up/Down Camera moving speed.
- Auto PAN Speed: This is automatic moving speed.
- Auto Panning On/Off: This displays Auto Pan setting status.
- Patrol On/Off: This displays Patrol setting status.

* Operational Feature by Cameras

	PELCO-D	PELCO P	Panasonic	Oriental	LPT-A100L	LG-SD110
Focus-ctrl	O	O	O	O	O	O
Zoom-ctrl	O	O	O	O	O	O
Iris-ctrl	O	O	O	O	O	O
Patrol-ctrl	O	O	O	O	X	X
Autopan(on/off)	X	O	O	O	O	O
AutoPan(P1,P2)	X	O	O	X(Hardware)	O	O
Pan-speed ctrl	O	O	O	X	X	O
Tilt-speed ctrl	O	O	O	X	X	O
Autopan-speed	X	O	O	X	X	O

3) Selecting channel: #1 button is used to change the current channel.

4) Focus In/Out : This controls focus of camera.
Use #2 button (Focus In) and #3(Focus Out).

5) Zoom In/Out : You can enlarge(#4 button) or reduce (#5 button).

6) Iris In/Out : Control brightness of camera.
Use #6 button (Iris In) and #7 button (Iris Out).

7) Patrol : This feature allows you to operate camera automatically in order that you have set camera motion. Patrol allows you to set all directions like Up/Down/Left/Right.
- Start(#8 button) : Operates Patrol feature.
- Learn(#0 button) : Move direction of camera as you wish with using direction buttons after pushing this button.
- Stop(#9 button) : Remember areas moved with Learn button.

If you push Patrol Start button, it is automatically operated according to path setting.

8) Auto PAN : Allow you to move cameras by setting left and right two points.
- On('REW')/Off('PLAY') : Select operation status of AutoPAN feature.
- P1('FF') : Push P1 button after moving camera direction to first point.
- P2('SLOW') : Push P2 button after moving camera direction to two points.

If you push On ('REW') button, it moves while repeating P1 and P2 automatically, and you can stop operation by pushing Off ('PLAY') button.

* For connection of PAN/TILT Camera Receiver part, refer to user's manual of the related PAN/TILT Camera.

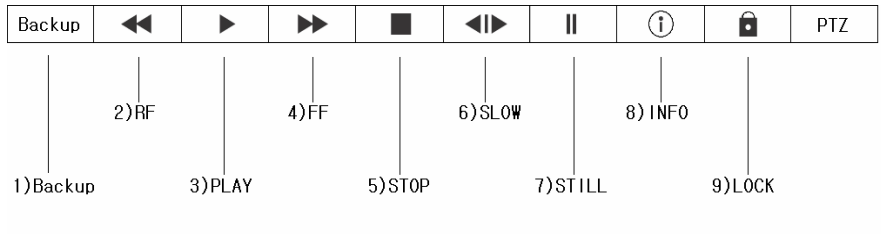
3-2. Search Screen

▶ **Play Screen GUI (4ch)**

Play : Forward normal speed
Playback : Backward normal speed
FF (Fast Forward): FF×2, 4, 8, 16, 32, 64 times faster
FB (Fast Backward): FB×2, 4, 8, 16, 32, 64 times faster
SF (Slow Forward):SFx1/2, SFx1/4
SB (Slow Bacward):SBx1/2, SBx1/4
STILL (Pause)
Frame advance : use the right and left key OR 'STILL(#7)'

▶ **Various Search Features (4ch)**

For search feature, you can perform searching easier and faster with using those buttons located at front side of the product.



1) Go to the 'Backup' directly.

2) Play images backward fast (Every time you push, it is changed to 2, 4, 8, 16,64 times faster) If you push PLAY Button, it returns to real time playing.

3) Play recorded images in real time. If you push PLAY Button again while playing, playing screen stops and List window is appeared.

4) Play images faster. (Every time you push, it is changed to 2,4,8,16,64 times faster) If you push PLAY Button, it returns to real time playing.

5) Stops playing and returns to LIVE Screen.

6) Play images slowly. (Every time you push, it is changed to 1/2,1/4 times faster) If you are in forward direction, it changes the speed to slow forward and vice versa.

7) This pause images being played and it returns to real time playing if you push Play Button again.

8) This displays image information on screen and turn it on the GUI and OSD.

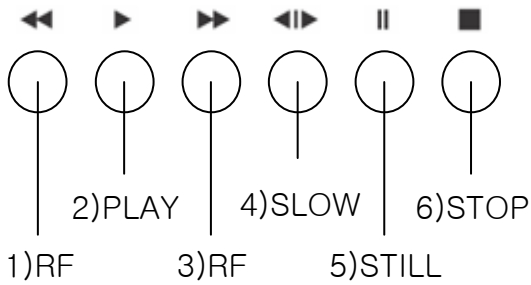
9) If you push this button on the chosen file on the Log List, it prevents from removing while HDD overwrite.

▶ Play Screen GUI (8 and 16 ch)

Play : Forward normal speed
Playback : Backward normal speed
FF (Fast Forward): FF×2, 4, 8, 16, 32, 64 times faster
FB (Fast Backward): FB×2, 4, 8, 16, 32, 64 times faster
SF (Slow Forward):SFx1/2, SFx1/4
SB (Slow Bacward):SBx1/2, SBx1/4
STILL (Pause)
Frame advance : use the right and left key OR 'STILL'

▶ Various Search Features (8 and 16 ch)

For search feature, you can perform searching easier and faster with using those buttons located at front side of the product.



1) Play images backward fast (Every time you push, it is changed to 2, 4, 8, 16,64 times faster) If you push PLAY Button, it returns to normal playback.

2) Play recorded images. If you push PLAY Button again while playing, playing screen stops and List window is appeared.

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4) Play images slowly. (Every time you push, it is changed to 1/2,1/4 times faster) If you are in forward direction, it changes the speed to slow forward and vice versa.

5) This pause images being played and if you push Play Button again it returns to normal playback.

6) Stops playing and returns to LIVE Screen.

For searching the recorded files, push ‘Search’ button in front of DVR. You will see following search window.

1) Graphic Search

You can search the recorded files graphically using calendar.

2) Log List

This shows a list of files and events (Sensor, Motion Detection, System and Text in) log.

3) Text-in Search

You can search the transaction data and corresponding video recorded through Serial port.

4) Time Search

Input time you want to search directly for searching.

5) Backup

You can backup to the CD, DVD and USB memory by time criteria.

3-2-1. Graphic Search

This displays all recorded images graphically.

figure1

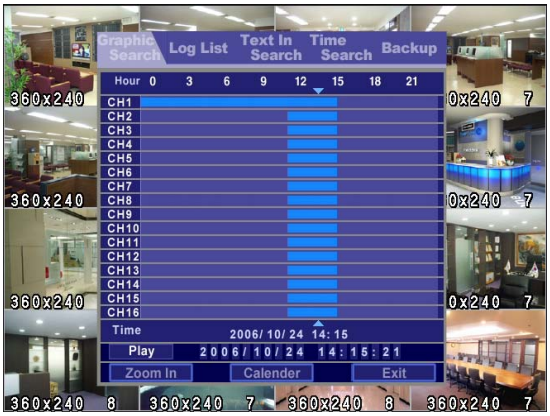


figure2

figure3

After choosing the ‘Graphic Search', you can see the calendar at first.

Use the arrow keys, go to the wanted date which are lit in white.(figure1) Then pushing the ‘Enter’ button, you can see the bar graph from 0 to 24 hour below the date list.(figure2)

Sky blue bar means that there is a recorded file at that time. Use the arrow key to go to the wanted time.

If you push the ‘Zoom In' button, you can zoom in the time bar for the fine searching. After that, push Enter button and it starts playback (figure3).

On playback, If you push the 'Exit' button on playback, you can move to the search screen. If you push the 'Stop' button, the screen goes to the live screen.

You can also change the display mode using ‘Display’ button.

3-2-2. Log List

figure1

figure2

After choosing the ‘Log List', you can see the date at first.

Use the arrow keys, go to the wanted date, which are lit in sky blue (figure1).

In this search mode, you can search the File and Event List which include event, record, and system log. And also you can choose the specific log such as file, sensor, motion detection, video loss and system by using the arrow key (figure2).

Moreover Event regarding to video, you can play directly.

3-2-3. Text In Search

After choosing the ‘Text In Search', you can see the search criterion at first. Use the arrow keys, enter the wanted date, time, channel and keyword using the number keys on the front.

And you can use the virtual keyboard to enter the keyword. To appear the virtual keyboard, use the ‘Enter’ key. After entering the keyword, push ‘Menu’ button to exit the virtual keyboard and push ‘Start’ button to search.

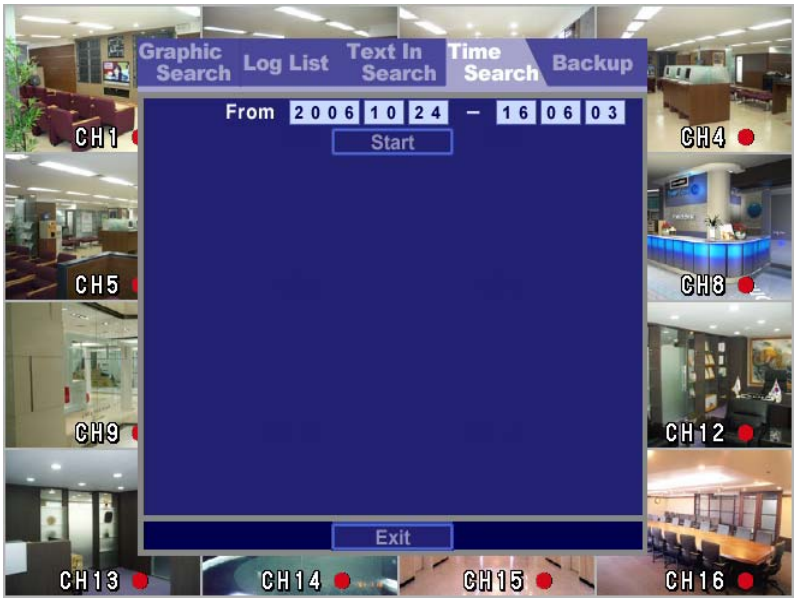
You can see the date list including the keyword and time range. Using the up, down arrow key, choose the wanted date and push ‘Enter’. If you want to search again with different conditions, push the ‘#1’ button.

* Text in playback will be supported only in the 1 CH full screen mode

* To set the device such as cash register or ATM, refer to 3-3-3 Event

* Text in file length is determined by event duration. So if you want the longer file, change the event duration longer.

3-2-4. Time Search



This is very useful function to type the time directly you want to search. If you choose the Time Search, you will see following window.

If you input searching time with using number button, relative file or the closest file is directly played. If you push the Exit button on playing, it goes to the Time search again if you push the 'Stop' button, it goes back to the live screen.

3-2-5. BACKUP

You can backup the recorded files on CD,DVD,USB and playback from those directly.

figure1

figure2

1) How to backup

There are two ways to back up. You can go to the backup menu in search. After inserting the empty media on the drive or USB, go to ‘Backup’ . Press the ‘Enter’ button then you can see the backup screen.(figure1) Input the desired time and channel to backup using the number keys on the front. After confirming, it starts. If chosen time is bigger than the media, time will be adjust automatically.

Or you can push the ‘Backup’ button upon playing. Next procedure is the same and the time sets for 10 minutes automatically.

There are two format on backup file, AVI and DB. The AVI format is adapted 1ch backup. You can play with Windows Media Player if you backup with AVI format. If you want multiple channel backup, choose the DB format. You can play with our client software with this format.

2) How to play

Insert the recorded media to the drive and execute ‘Backup’. You can see the screen like figure2. Choose the date by the arrow key and press the ‘Enter’. Sometimes FF or FB have some difficulties for the reason that CD, DVD is not enough to fast.

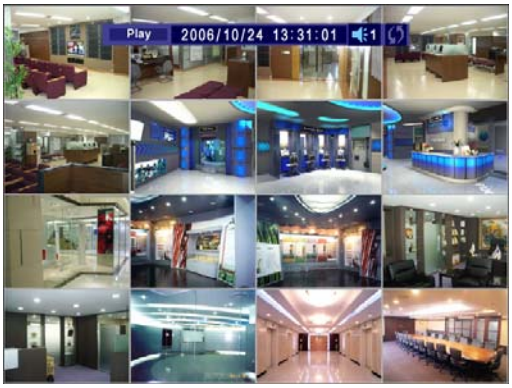
3-2-6. File Search in Play Mode

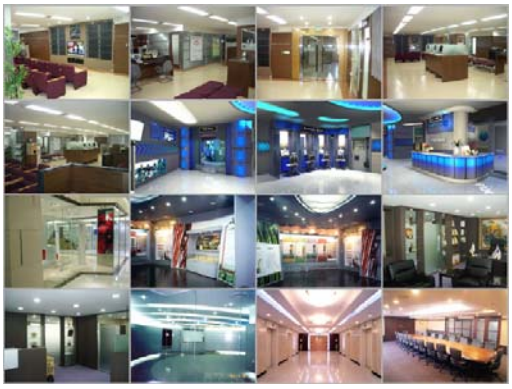
If you push PLAY Button while playing a file, Date/Time window will appear and you can select and view time you want by using direction buttons.

3-2-7. INFORMATION Feature in Play Mode

When you play a recorded file, file information for currently playing file is displayed. If you push INFO(#8) button again and again, GUI disappear->OSD disappear->GUI appear->OSD appear will happen sequentially.

* This will not be activated when recording is being done.





3-2-8. Instant Replay

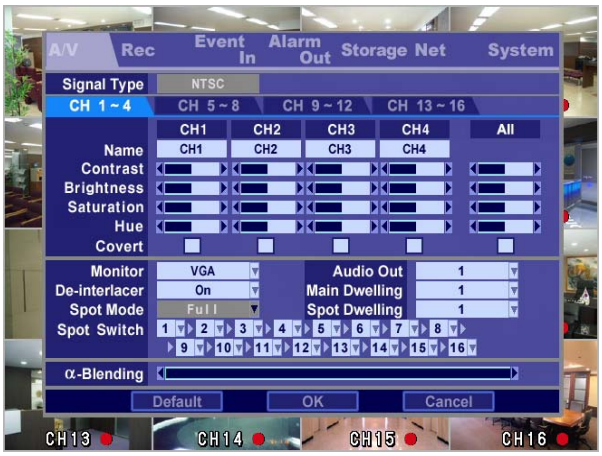
This is very convenient function to catch the abrupt accident. During live viewing, you can go directly to the playback screen.

If you push the 'PLAY' button or any other buttons related playback upon live viewing, the DVR goes to the 'PLAY' with the present time screen. So it can be possible to use the functions of 'playback'.

Push PLAY

3-3. SETUP MENU Screen

If you push MENU Button in LIVE Mode, following window appears and you can change various product settings.



※ For moving the menu, use Up/Down Button. For changing the setting, use Left/Right Button.

※ In order to save the change of setting, you have to move to upper menu by pushing ENTER Button after setting all menus. If you close by pushing EXIT Button without pushing ENTER, changed setting is not saved.

※ If you have 4 or 8 ch, you can see some taps are disable. Thai is, on the case of 8 ch, the tap 9 to 16 will be disable.

3-3-1. A/V(Audio/Video)

In this menu, you can change setting for Audio and Video.

1) Signal Type: You can change NTSC/PAL using the slide switch in rear panel. It causes not to display the right images, so be careful to change the signal type.

2) Channel Name: You can set the camera name.

If you select the Camera Name using 'Menu' button, it appears the virtual keyboard in screen. Use the arrow key to go to the wanted letter and push the 'Enter' key to input the character. You can also use the hot key for shift, space and delete. After inputting the name push the 'Menu' button to save and exit.

It will go to the A/V menu when pushing ENTER Button after setting all menus. If you close by pushing EXIT Button without pushing ENTER, changed setting is not saved.

3) You can adjust images of camera by channels.
- Contrast: Adjust contrast of camera.
- Brightness: Adjust brightness of camera.
- Saturation: Adjust saturation of camera.
- Hue: Adjust color of camera.

You can see changing status of Contrast, Brightness, Saturation, Hue with a progress bar. Adjust them with using Left/Right arrow button while viewing screen. If you want all the camera simultaneously, use the 'ALL' button. It will effects on every channel.

4) Monitor : You can choose the monitor between VGA and composite. The screen size will be optimized with the selected monitor.

5) Deinterlacer: activates interlacing in playback.
This would solve the bad screen when pause or Slow playback in playback in full screen of 720*480(720*576) if you click "ON".

6) Spot mode : You can choose the spot output between full screen and quad.

7) Audio Output : You can hear the live sound on live quad viewing according to set this menu. In full screen you can hear the chosen channel regardless of setting, If you choose mute, there is no sound but still recording.

8) Main Dwelling : It defines the switching time of main output.

9) Spot Dwelling : It defines the switching time of spot output.

10)Spot Switch : You can set channel orders being switched. You remove the video loss channel in here upon spot switching.

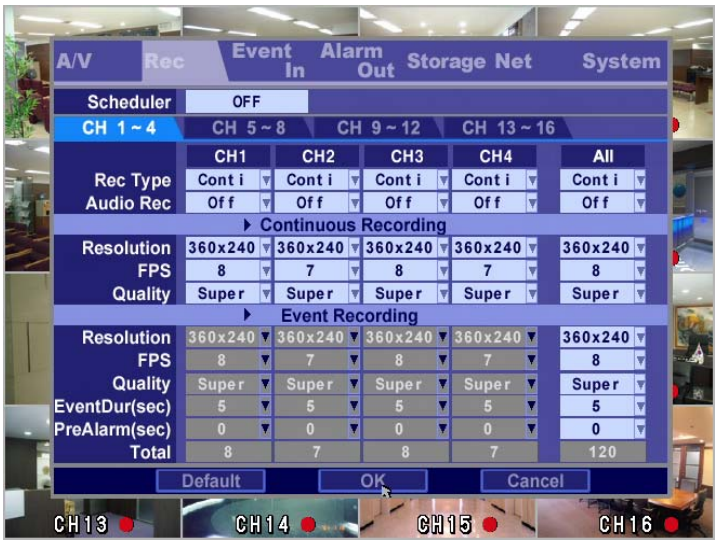
11) a-Blending : This adjusts the transparency of GUI. This operates with Left/Right buttons and the transparency is adjusted while a bar is moving.

3-3-2. Rec (Recording)

With this menu, you can set the recording variables of DVR and the Scheduler.

[When Select Scheduler Off]

If you select Scheduler Off, Scheduler Recording setting window disappears and a window to set normal recording mode appears. Since you can set normal recording and event recording differently, you can use it conveniently as you want.



1) Rec type: to set conti, event, C/E(conti and event) and none(not recording).

2) Audio Rec: to select audio recording or not.

3) Conti Recording: continuous recording mode setting.

① Resolution: There are three kinds of resolutions. Among 360X240(CIF), 720X240(2CIF), 720X480(D1)(OR 360X288, 720X288, 720X576 in PAL), you can set individually.

② FPS: Set recording frame rate. 1,2,3,7,10,15,30 are possible within 135fps based on CIF. 2CIF is equivalent 2XCIF and D1 is equivalent 4 times CIF. So there are many combinations under this rule. For example, if in case that ch1 is 2fps/D1, ch2 is 5fps/2CIF and the others is 3fps/CIF , total frame number is 2x4 + 5X2 + 3X14 = 74. So it is valid. Another useful function is that one channel sets to 30fps/D1 and the others set to 1fps/CIF, total frame rate is 135. So it is also valid. You can check the total number of frames in 'Total' .

③ Quality: Set picture quality. As quality gets higher, screen quality gets better but saving period gets shorter because file size gets bigger. There are 4 steps quality such as Super, High, Medium and Low

To save the setting, choose 'Yes' after pushing 'Enter'.

4) Event Recording

This is a window setting Event Record Mode. Setting method is same as Conti Recording method. Conti Recording and Event Recording can be operated simultaneously.

So during no event input, DVR records by Conti recording settings. However if there is an event , it starts recording by Event Recording settings during Time(sec). This function is very useful when you want to operate with the mixture mode.

- Event Dur(sec): to set post event recording time. You can choose between 1~60 seconds.
- Pre alarm(sec): to set pre event recording time. You can choose 1~5 seconds.

* Event recording has priority in recording. In C/E recording, the recording will follow conti recording setup in normal condition while it would follow event recording setup in event generation.

* For convenience, you can use the 'ALL' menu to change with the same preference. You don't have to setup each channel if you using the 'ALL' function.

[When You Select Scheduler On]

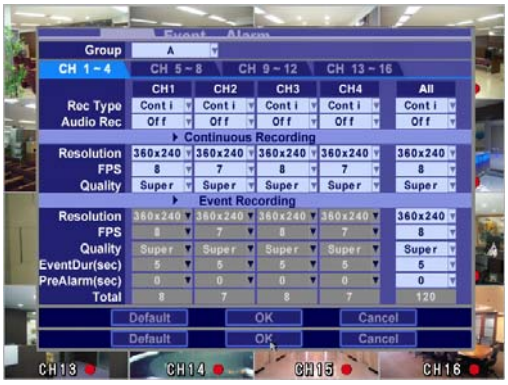
If you select Scheduler On, following [Schedule Recording] setting window appears. Since you can set recording weekly, you can reduce recording of unnecessary time period. In Scheduler window, days and channels are displayed, and recording information for each channel is displayed at bottom of window.

<How to set the weekly scheduler>

1. Choose 'Scheduler' to 'On'.
2. Move the cursor to wanted time push '#1' button to select the start time.
3. Use the arrow key to enlarge the area.
4. Push ‘Enter' button to change the group of the selected area.

<How to set the group>

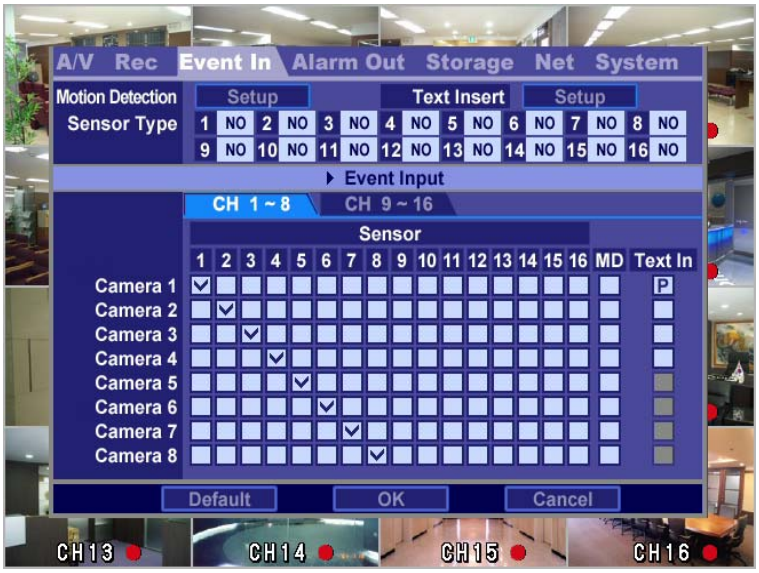
1. Choose 'Scheduler' to 'On'.
2. Move to ‘Group Setup’ and push the ‘Enter’ button, then Group Setup Screen appears.
3. Choose the group which you want to change setting.
4. Go to the setting area using keys.
5. Change the value like normal recording setup.
6. You SHOULD push the ‘OK’ to preserve all the settings.



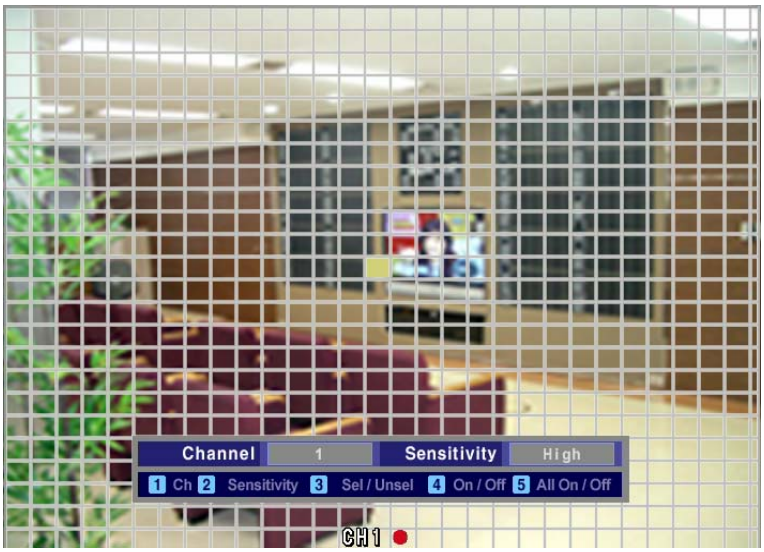
*In recording, Schedule recording setting is most preferred. So if you activate the weekly scheduler, you cannot record manually.

3-3-3. Event In

With this menu, you can set sensor input/output, motion detection feature and text in setup. If you set this feature, it is converted to record mode automatically if there is an Event generation although you don't use Record Button at front side. You can also set each channel individually.



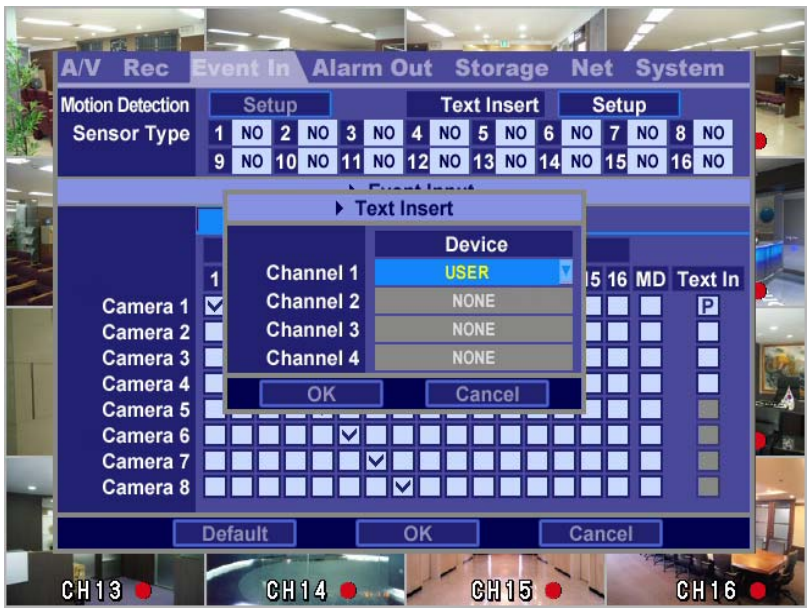
1) Motion Detection
If you choose 'Motion Detection', a window allowing you to change motion detection will appear.



① Channel: Select a channel you want to set for motion detection record.
② Sensitivity.: Users can set this as default value for detection motion and input range is within 1~10. Using #2 button to change the sensitivity. 1 is the lowest sensitive value and 10 is the most sensitive value.
③ Sel/Unsel : Move the cursor to wanted area push '#3' button to select the start area. Use the arrow key to enlarge the area.

④ On/Off : This will activate or deactivate the motion detection of the selected area.
⑤ All On/Off : This will activate or deactivate the motion detection of the whole area.

2) Text Insert
In case of using the POS or ATM, you should choose the right device. Using the arrow key, go to the 'Text Insert' tap and push the 'Enter'. You can see the device choosing menu.



Go to the wanted channel , use the left and right arrow key to select the device. If you cannot find your device, please contact our technical support. The advanced setup of the device will be performed by client software.

3) Sensor type: to set type (N/O, N/C) for each Sensor.
The type of sensor should be set the same as with DVR. Otherwise, DVR may keep recording on while sensor is not activated.

4) Event Input: to set event input for each channel. Setup is expressed by V or P in the checkbox. V means “activation” of the sensor while “P” means “activation including pop-up”.

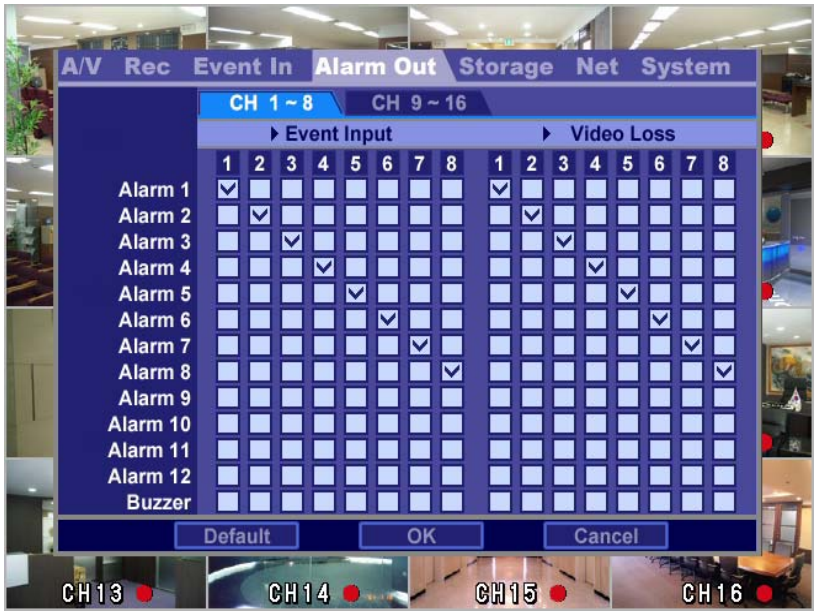
5) Summary regarding as Event Recording

	Event Input	**Motion Detection**	**Sensor Setting**
MD recording	MD	ON	OFF
Sensor detection and recording	Sensor	OFF	ON
MD,Sensor detection and Recording	MD/Sensor	ON	ON
MD,Sensor Detection and non-recording	None	ON	ON

*In REC Menu, MD recording, Sensor detection recording, MD, Sensor detection recording and no recording are determined according to Event Input.

*Although you set Motion Detection and Sensor Setting to On in Event menu, if Event Input in Rec Menu is set to None, it only detects and does not record.

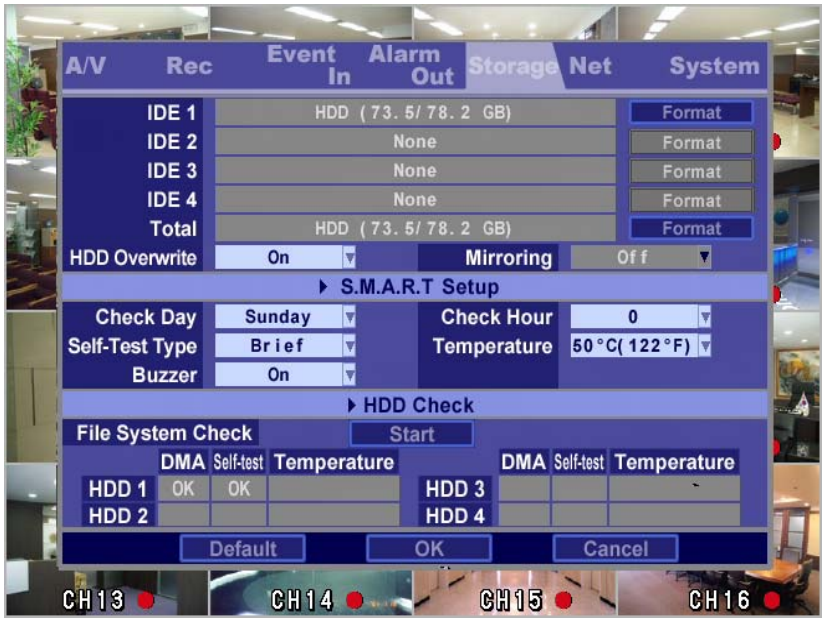
3-3-4. Alarm Out



1) Alarm 1~12 : It sends the alarm output to checked ports. From 1 to 4, the output is dry contact. So you can connect directly the other electronic devices using this ports. From 5 to 12, the output is TTL. So you can use this signal to control the other devices.

2) Buzzer : This will be enable to turn it on and off the internal buzzer sound upon events.

3-3-5. Storage



1) IDE1~IDE4
Display the information and usage of the hard disk drives. If you push the 'Format' button on each IDE, only that HDD will be formatted.
If you install the backup drive such as CD-RW, DVD, that information will be shown on IDE4.

2) Total
Display all the HDD usage being used for the product. If you push the 'Enter' button on here, all the hard disk drives will be formatted.

3) HDD Overwrite
Determine whether you want to continue recording if there is no spare saving space at hard disk drives.

4) Mirroring
If you install two hard disk drives, you can set the second drive as a backup drive by mirroring. If you choose 'On', you will be asked to format the second drive. After conforming, the mirroring starts. This is the best way to avoid the data loss. If you encounter any hard disk problem, you can perfectly restore the data from the mirror hard disk drive.

5) S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) Setup

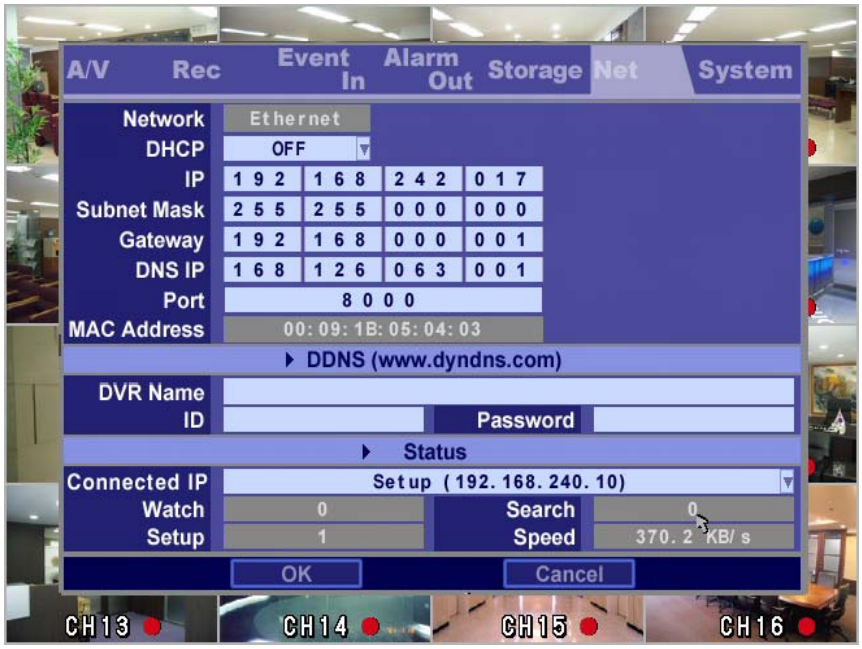
This function lets you probe the hard disk drives and investigate the status of the drivers automatically. If you push the menu button upon this position, the setup window will appear.

Check day : Determine the date to perform the SMART.
Check Hour : Determine the hour to perform the SMART.
Self-Test Type : You can choose between brief and detail.
Temperature : The upper tolerance of the hard disk drive
Buzzer : If you choose 'On', the internal buzzer will beep when the hard disk drive has a problem.

6) HDD Check

File System Check : You can check the file system whether it is correct or not. If there is a problem, it will be automatically fixed.
Status : This shows the latest result of the DMA(Direct Memory Access), self-test and temperature of hard disk drive. If it displays 'Fail', it is recommended to change the hard disk drive(s).

3-3-6. NETWORK



This is IP address setting when DVR is connected to LAN.
Input IP Address, Subnet Mask and Gateway you want to input and then save them by pushing ENTER Button. (If you connected PC and DVR on 1:1, Subnet Mask and Gateway value of PC and DVR should be set to be same.)

1) DHCP (Dynamic Host Configuration Protocol)
Set whether you want to use DHCP or not (On/Off)
If you connect LAN after setting it to On, IP is allocated automatically. If you set it to Off, you have to input IP. DHCP is a protocol that allows managers to manage and allocate IP address centrally.

2) Port
You can set the port number of the DVR. The default is 8000. You can choose from 8000 to 9999.

3) DDNS (Dynamic Domain Name Server)
This is the function to automatically change the IP of DVR to URL. This product supports the DDNS service of www.dyndns.org. So if you want to use this function, you join www.dyndns.org at first and get the URL.

① DVR Name
Type the URL of DVR. Push 'Enter' button first, using the virtual keyboard, type the address except http:// .

② ID, Password
Type the ID and password that is registered in www.dyndns.com.

4) Status
This shows the information how many connections and what is the action of each connection.

① Connected IP : This displays all the connected IP.

② Watch : This displays how many connection for live viewing.

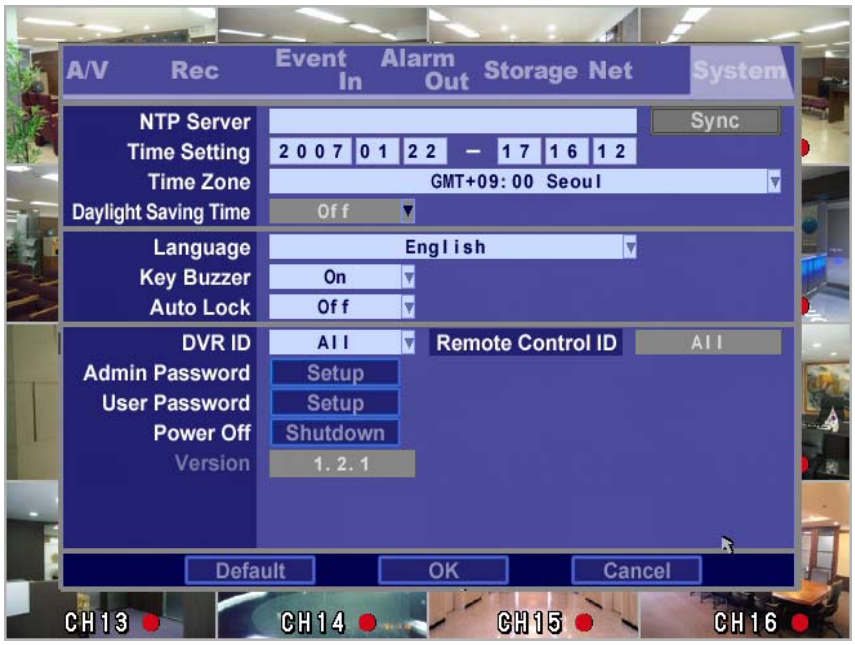
③ Search : This displays how many connection for playback.

④ Setup : This displays how many connection for DVR setting.

⑤ Speed : This displays the practical bandwidth of network.

3-3-5. SYSTEM

In this menu, you can set product's system (time, HDD information) , change Password and power off.



1) NTP (Network Time Protocol) Server

This function is to change the time of DVR automatically via network.

Push the 'Enter' button and using the virtual keyboard, type the address of NTP server.

2) Time Setting

This sets product time. Input time by pushing number buttons after moving cursor with direction buttons. Be careful to move to backward. The overlapped data will be deleted with warning message.

3) Time Zone

Choose the time zone of your site. If you using the NTP function, it must be set correctly to your zone.

4) Daylight Saving Time

It enables to adapt the day light saving time automatically.

5) Language

You can choose a different language. Basically 5 languages can be loaded. Factory default is that English.

6) Key Buzzer
Turn it on/off the buzzer sound when push the button.

7) Auto Lock
Lock Time allows you to set system lock setting that makes system to go into lock mode for certain period of time. You can select within 1~10 min. When Lock Time is Off, you have to have Admin authority to change this setting.

8) DVR ID, Remote Control ID
This sets the ID of remote control. If you have many DVRs in the same place, you can control separately the DVR by different remote control ID.
Use the ID setup and number key to set the ID of remote control on the remote controller. You may check the ID by pushing the remote control key. The ID should be the same between the DVR and remote control.

9) Admin Password
This sets Admin Password.
Move cursor over Admin Password Setting, then push 'Enter' button. If you input correctly Old Password/New Password/Confirm, the password will be changed.

10) User Password
This sets User Password. The procedure is the same as Admin Password setting.

* If you log on with User password, you can only play the recorded files.

11) Power Off
Power off the system. This menu will make the DVR go to the standby mode. If you want to completely turn it off, use the main power switch on the rear panel.

12) Version
The firmware version is displayed in here.

CH4. Mouse Operation

4. Mouse Operation

You can operate the DVR with the mouse. You **should** use the USB/PS2 compatible mouse only. The mouse must install before booting. If you install the mouse after booting, you can initialize the mouse using the pushing the Exit button twice on the live mode.

On the live screen, click the right button. The menu screen will appear.

If you move the cursor to wanted menu, the sub menu will appear. Use the left button to choose the menu.

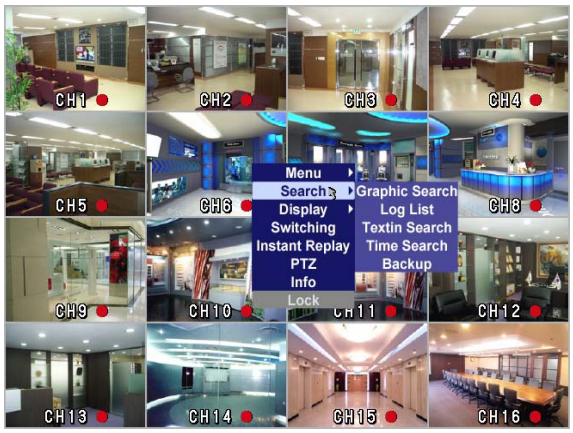
Refer to Ch.3 to use the detailed menu.

1) Sub menu of 'Menu'

- AV
- REC
- Event In
- Alarm Out
- Storage
- Net
- System

2) Sub menu of 'Search'

- Graphic Search
- Log List
- Textin Search
- Time Search
- Backup



3) Display

- full screen
- quad screen
- 6 splitting screen
- 9 splitting screen
- 8 splitting screen
- 13 splitting screen
- 16 splitting screen

4) Operation upon Play with the mouse

If you move the cursor below upon play mode, the play menu will appear lower position. You can choose the all functions of playback.

CH5. Client Program

5-1. Installing Client Program

This program supports Windows 98, 2000, ME and XP.

This program installation is for communication between DVR and PC.
Execute SETUP.EXE on CD provided with the product.
When you followed installation procedure properly and Active DVR 104V folder is created on program menu, program installation process is completed.

You can play Live image of DVR and search files recorded on DVR by connecting DVR and PC with LAN through Client Program. Moreover, you can upgrade S/W of DVR with Firmware provided with the product and save still image on PC in Search Mode of DVR.

CPU and VGA are absolutely effective for playing recorded file and recording performance. Since VGA is effective for several areas including errors and performances in regard to operation characteristics, you have to use verified products. If not you may experience not being able to see images or low screen quality while playing.

※ This client S/W sends and receives the huge amount of data. So it will be recommended not to execute with the other application program. Failure may be happen at that case. Especially vaccine program may make a trouble on live and playback.

▶ Recommended Client PC Specification
- CPU : Pentium Ⅳ 2.0GHz or higher
- RAM : 512MB or higher
- VGA : Memory 64MB or higher
- LAN : In 10/100 network environment, 100Mbps or higher environment,

▶ Available VGA

- Chipset from nVIDIA: GeForce 4- Higher than 64MB
- Chipset form ATI: Radeon - Higher than 64MB
- Chipset from MATROX: G450 - Higher than 64MB
- Chipset from Intel: Higher than 64MB

If you use a chipsets with lower specifications compared to the above benders, there might be program errors or low screen quality like black&white screen or you will even be unable to play.
You can only play with high color(16 bit) or higher, and you will not be able to play properly with 256 colors.

① Open CD-ROM Drive and Run Setup.exe and then Appear Setup Menu.

② Click 'Next'.

InstallShield Wizard
Welcome to the InstallShield Wizard for DVR Client
The InstallShield® Wizard will install DVR Client on your computer. To continue, click Next.
< Back
Next >
Cancel

③ Ask designate Folder to Install the program
Recommend Basic setup c:\program files\Digital Video Recorder \DVR client
Click Next.

InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install DVR Client in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\...\Digital Video Recorder\DVR Client
Browse...
InstallShield
< Back
Next >
Cancel

④ Showing Progress of Copy of Files.

⑤ Click ‘Next’

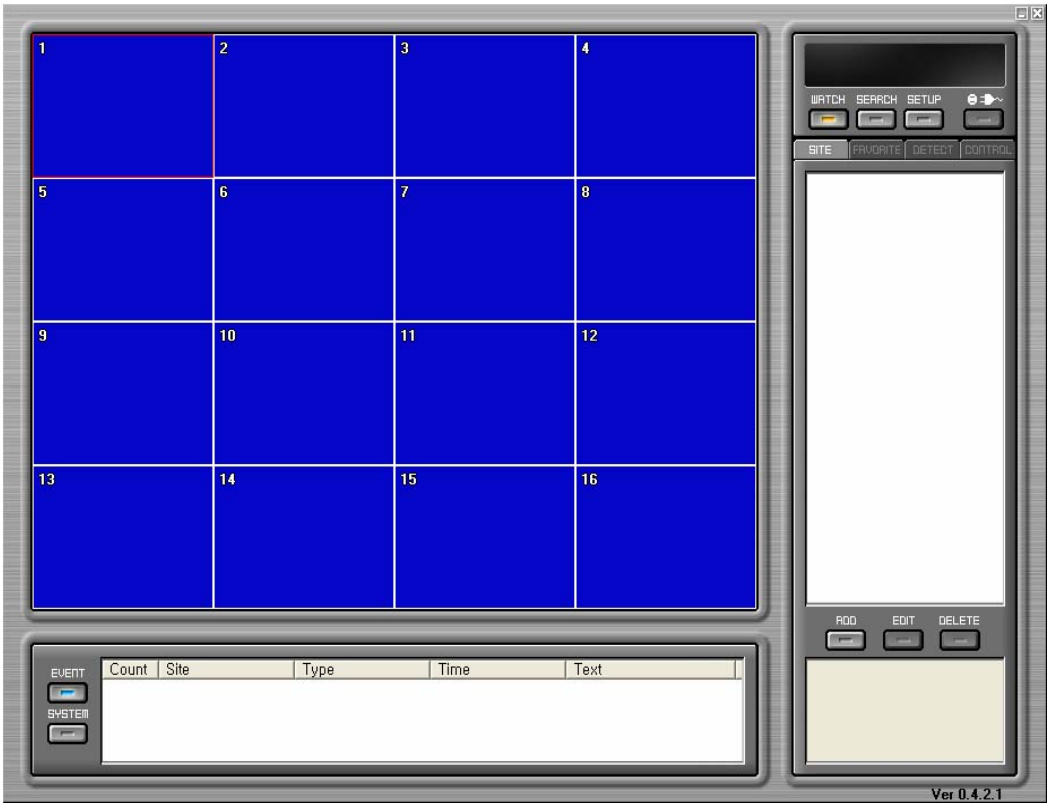
InstallShield Wizard
Start Copying Files
Review settings before copying files.
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings:
InstallShield
< Back
Next >
Cancel

⑥ When Finishing Installation, click ‘Finish’.

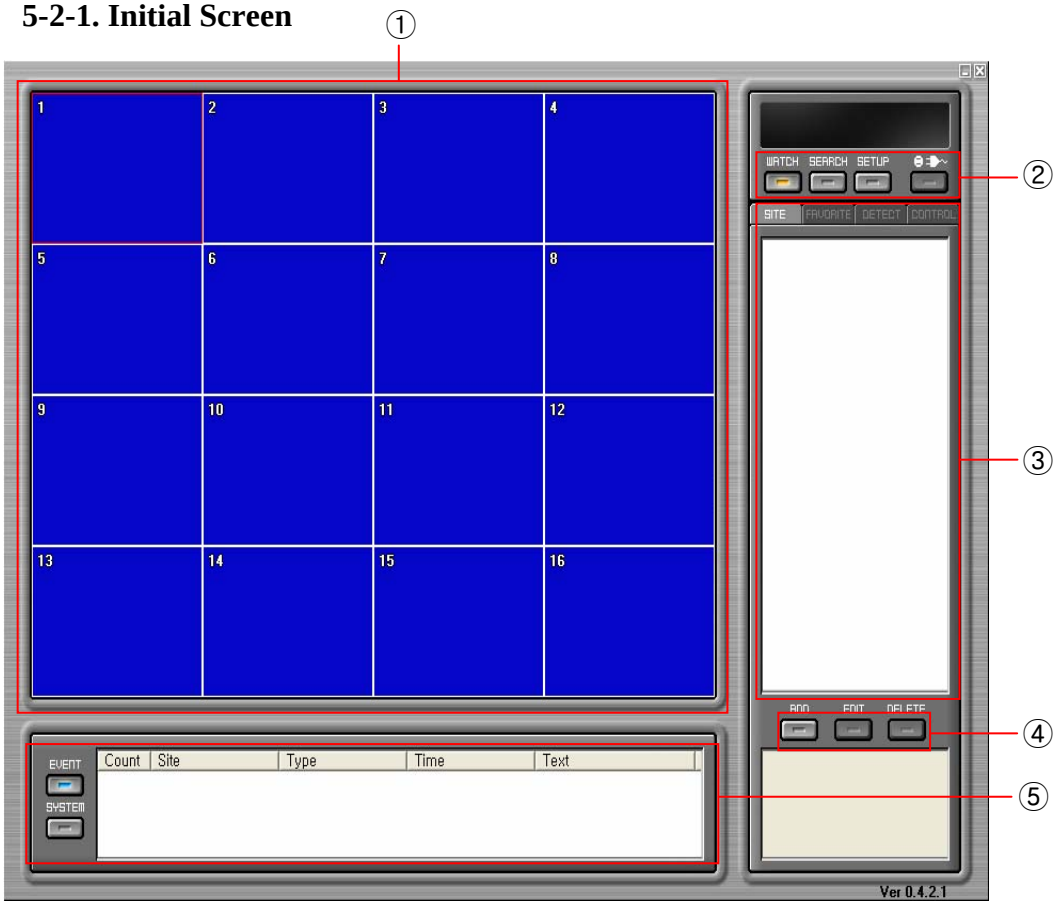
⑦ Finish Program Installation

5-2. How to Use Client Program

If you execute Client Program, you will see following password screen.
After entering the right password(default is none), you can remotely see Live Image on DVR through Client Program, and you can search, play and set the DVR.



5-2-1. Initial Screen



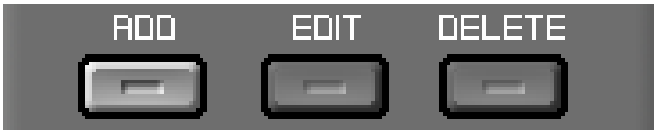
① This displays the live and playback images.

②

WATCH : Live screen.
SEARCH : Playback Screen.
SETUP : Setup of connected DVR.
CONNECT : This connects or disconnects from the selected DVR.

③

Site : This shows the DVR list which you want connect.
Favorite : You can connect multi-DVR using this. You can also make a list of IP Addresses you frequently use for your convenient use.
Detect : Upon selecting this, all the DVR which connect to your LAN display on the box.
Control : This changes to control window after connecting.

④ 

Add : You can add new IP Address.
Edit : You can edit IP Addresses and other connection information on the list.
Delete : You can remove saved list.

⑤ If you choose ‘EVENT’, all event will be displayed. If you choose ‘SYSTEM’, only the event regarding system will be displayed.

5-2-2. Connecting the DVR

If you click ‘Add’ button at lower right corner of initial screen , you will see ‘Site Add’ window. You can add the wanted DVR in this window.

Group – You can set the group of DVR. You can choose the existing group or add any DVR to the group.

Name – You can set the name of the DVR.

IP Address - You can set the IP address of DVR.

Port – You can set the port number of DVR.

Num Channel – You can choose the number of channels of the DVR.

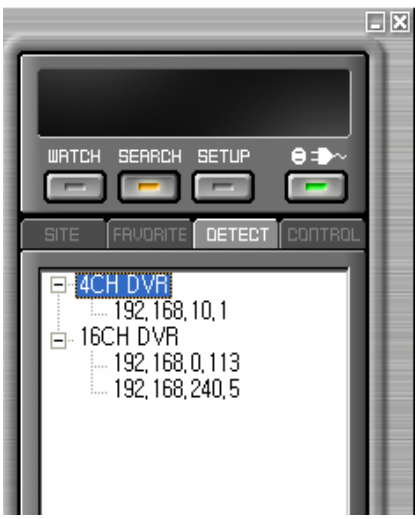
ID – Please type the ID.

Password – Type the password of DVR.

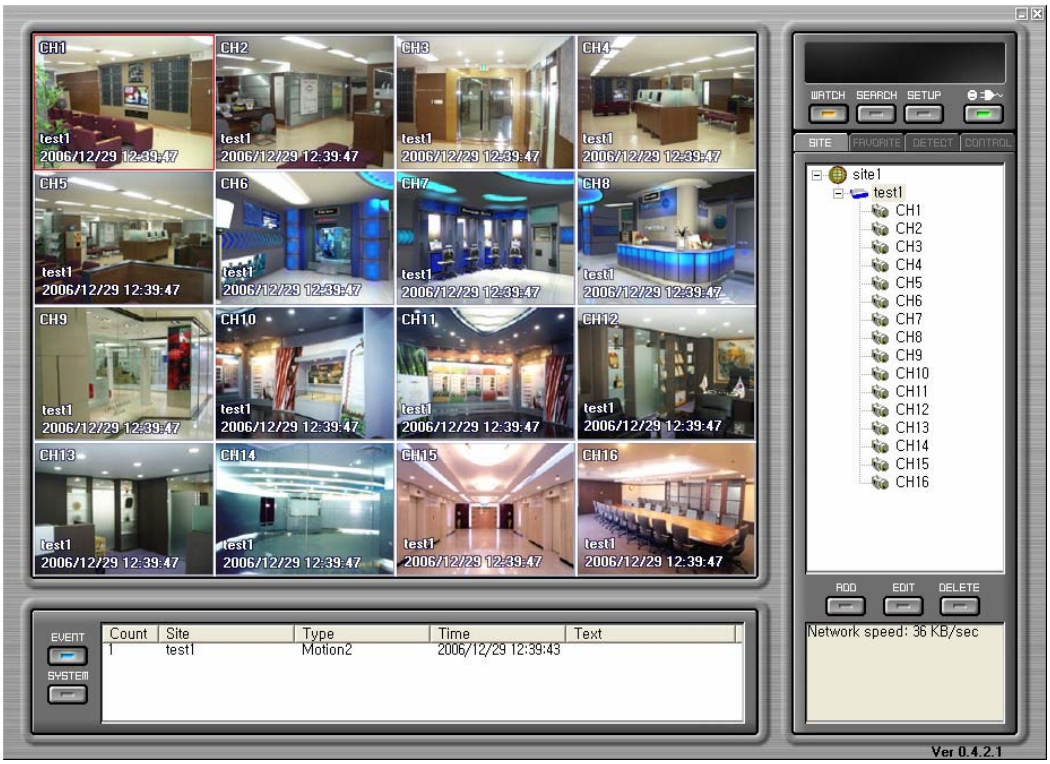
After entering all the field, click the ‘OK’. The DVR list will be added on ‘Site’.

Another way to add the DVR is to use the ‘Detect’. If you move to ‘Detect’, all the possible

DVR will be shown. Choose any IP and click the ‘add’ button to add the DVR to your list.



5-2-3. Initial Screen after connection

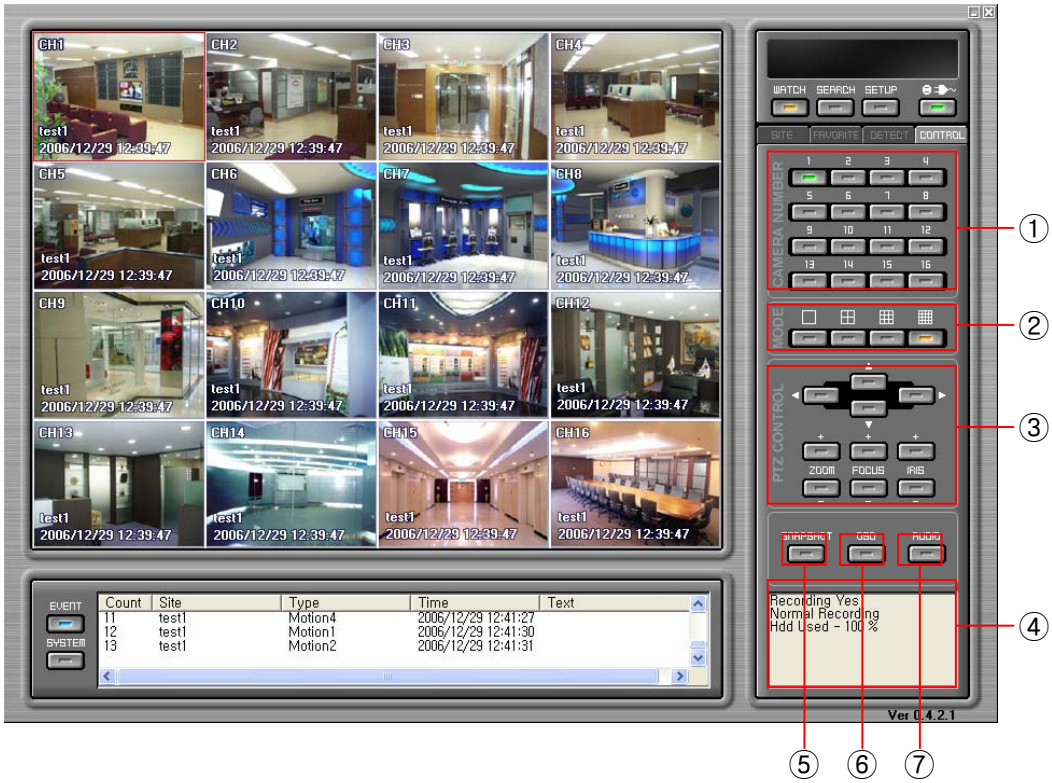


Choose the DVR on the 'Site' list and click the button. You can see the live screen of the selected DVR.

If you choose 'Favorite' tap, you can connect many DVR at the same time and also you can make your own favorite DVR group.

5-2-4. WATCH – Live viewing

If you choose ‘Control’ tap after connection, you can see the control screen.



① Channel selection

② Display mode selection

③ PTZ control : You can control the PTZ camera .

④ Status : it displays the network speed and frame rate etc..

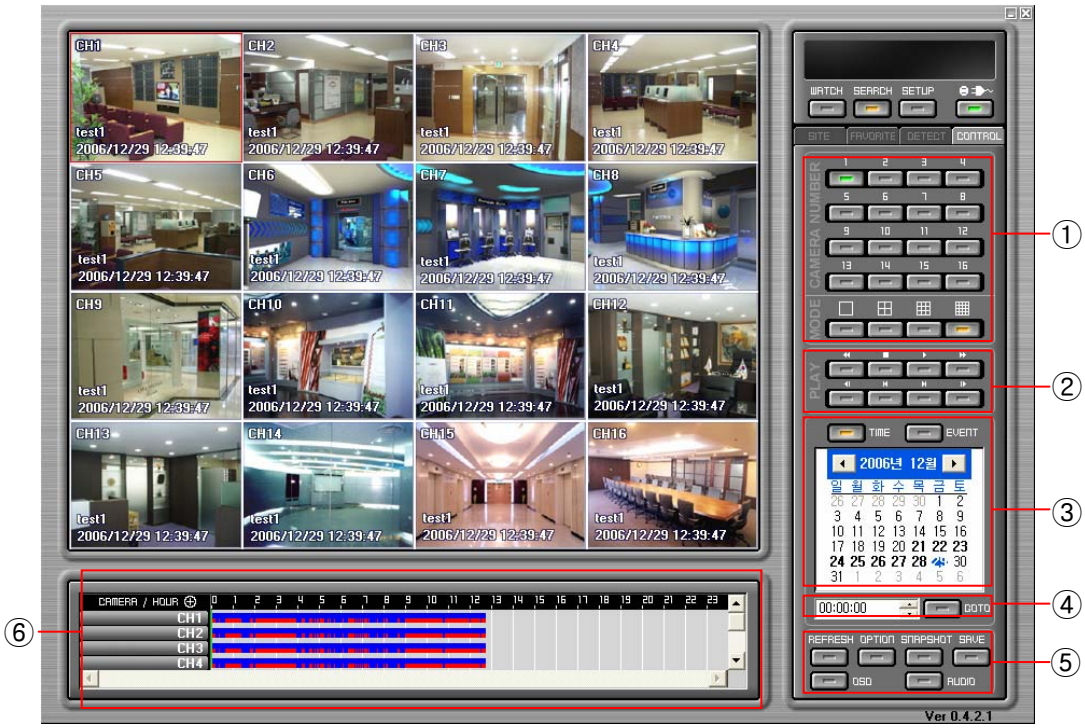
⑤ Capture Image : Used for getting snap shot. You can save with JPG or BMP. Refer to 5-2-5.

⑥ OSD : This turns the OSD On/Off on live viewing.

⑦ AUDIO : This turns the sound on/off.

5-2-5. SEARCH – Playback

If you choose ‘SEARCH’ tap after connection, you can go to the play mode.
If you choose ‘Control’ tap on ‘SEARCH’, you can see the below control.



① Channel and display mode selection
② Play speed control buttons

Fast backward.(1,2,4,8,16,32,64 times faster).

Stop playback

Fast forward.(1,2,4,8,16,32,64 times faster).

Normal playback.

Play slowly forward.(1/2,1/4 times slower)

Play slowly backward.(1/2,1/4 times slower)

Frame advance forward.

Frame advance backward

③ Calendar : You can select the date directly. When you choose the date, all the list display in ⑥ window. If you choose 'EVENT', you can search the event ((Sensor Input, Motion Detection etc.).

④ Time Search : If you know the time, you can go directly at that time using this. If there is no file on that time, it will automatically move to the closest time.

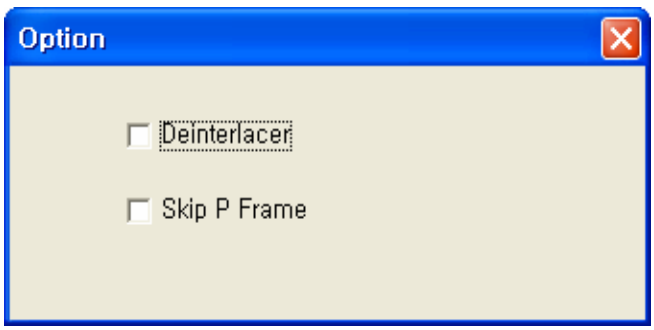
⑤

Update all the information.

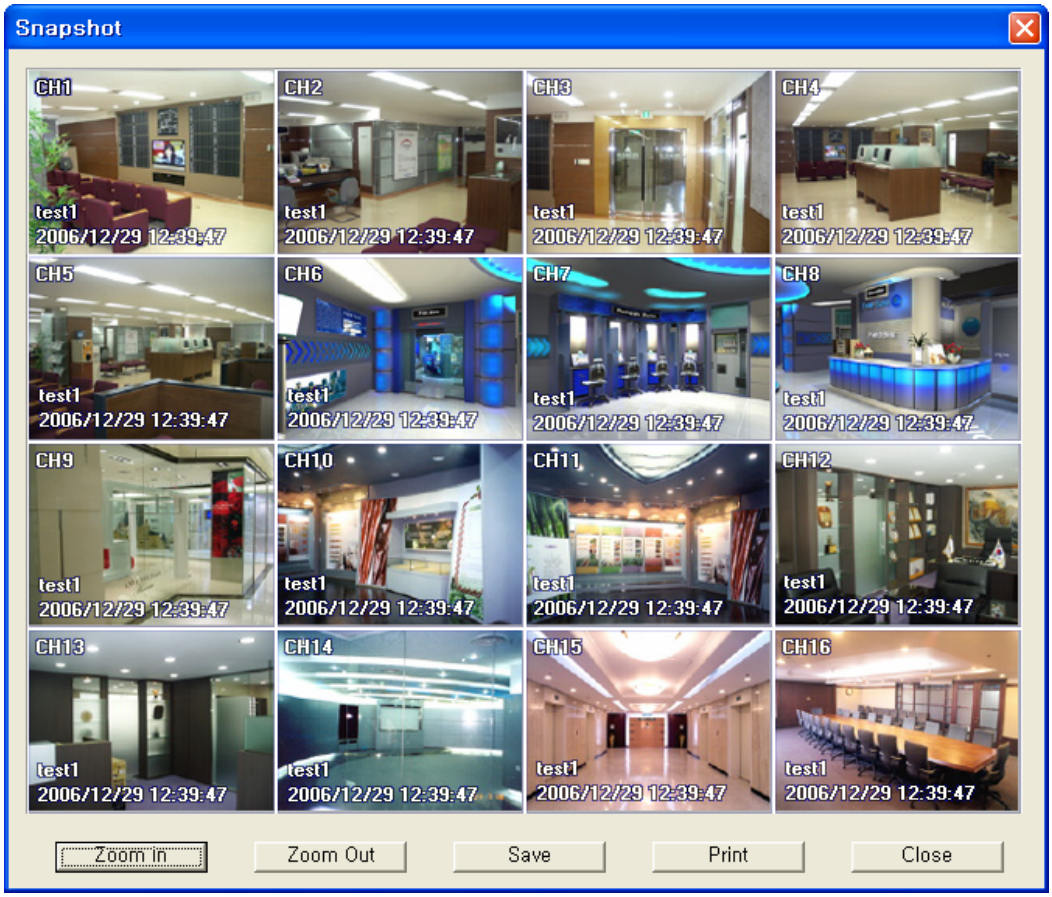
This will change the playback option.

Deinterlacer : It will remove the tail when you play with the D1(720X480 or 720X576) resolution and low frame rate (below 5 frames per second).

Skip P Frame : If you check this box on the case of using the narrow bandwidth network such as PSTN, it makes it possible to real time playback by skipping the P frame. .



Snapshot : This is the feature to capture the image in LIVE or PLAY as well as saving and printing it. If you push this button, following Image window is displayed.



Zoom In : You can expand image, every time you click it is expanded by 2→4times larger. (If you move mouse on figure, palm figure appears and you can move it to where you want to move to.)

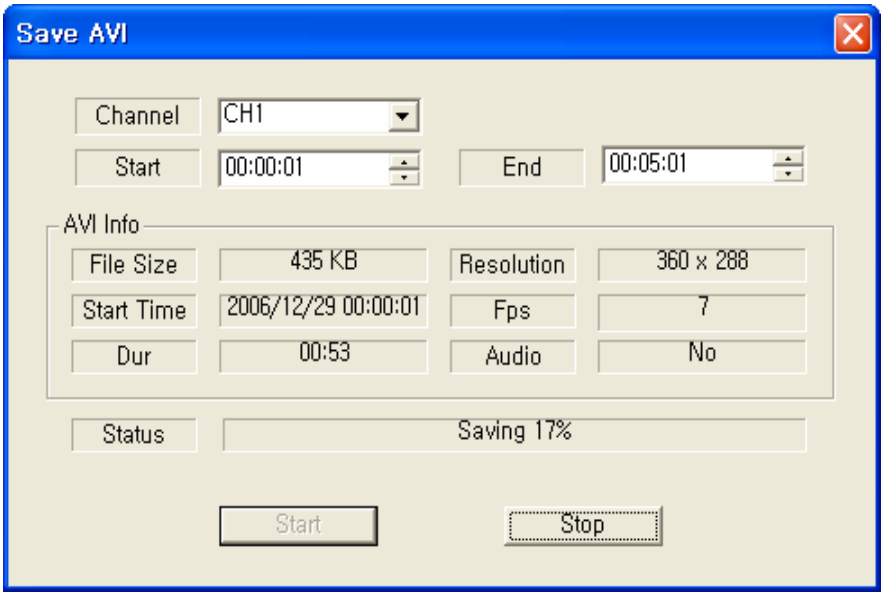
Zoom Out : Reduce expanded screen, every time you click it is reduced 1/2 times smaller.

Save Image : Save image as picture file. If you select where you want to save it and input file name and push Save Button, file is created. (you can save it as bmp or jpg file.)

Print Image : Print out still image through printer. You can print out the screen by selecting printer and pushing Print Button.

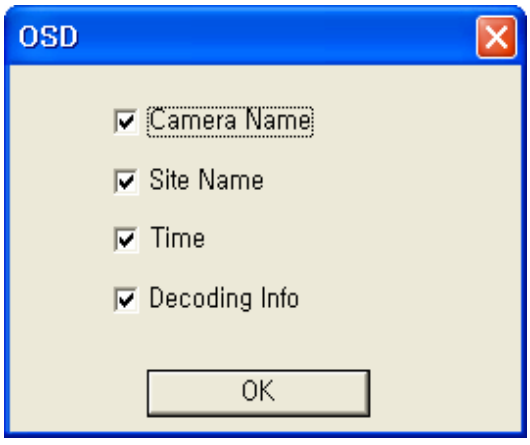
Close : Close Image Dialog window.

You can save the playback file with AVI format.



Enter the Start and End time. And push the 'Start. It will start to send the file to the PC and all the information of file will be displayed. After sending the file, choose the filename and folder.

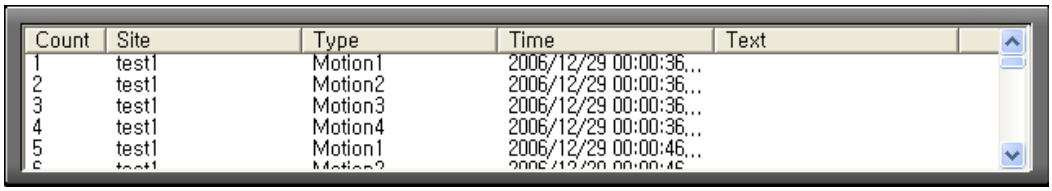
This can control the various kinds of OSD.



This turns the sound on/off.

⑥ This displays the recorded file by graphic bar. You can play just clicking the wanted time. The blue means the normal recording file and they red means the event recording.

If you select 'EVENT' on ③, the following event list appears. You can play by choosing the wanted event.



Count	Site	Type	Time	Text
1	test1	Motion1	2006/12/29 00:00:36,..	
2	test1	Motion2	2006/12/29 00:00:36,..	
3	test1	Motion3	2006/12/29 00:00:36,..	
4	test1	Motion4	2006/12/29 00:00:36,..	
5	test1	Motion1	2006/12/29 00:00:46,..	

On the screen, if you click the mouse left button, that channel will be full screen mode. If you want to go back the previous screen, click the mouse left button twice.

5-2-6. SETUP – Remote setup of DVR

You can set the preferences of the DVR remotely. Click the 'SETUP' button to set up the DVR remotely and setup screen will appear.

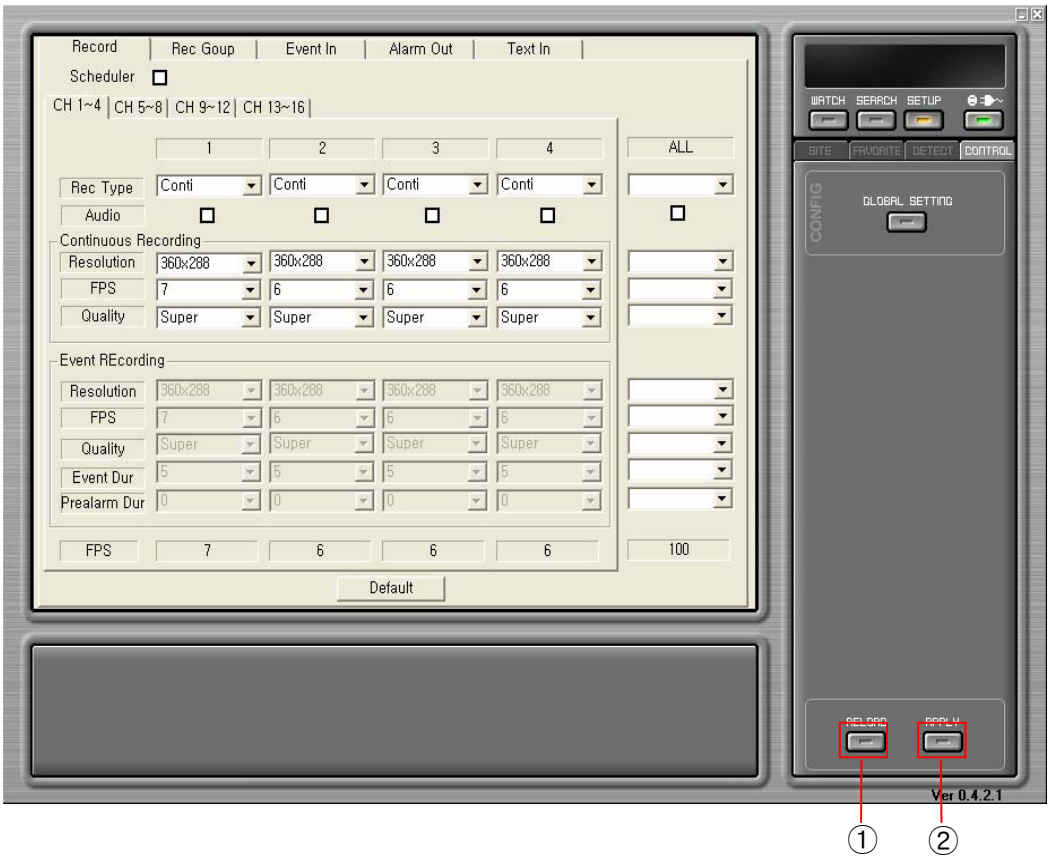
There are two setup ways ; Dialog setup and interactive setup. The upper screen is interactive setup. You can setup the DVR remotely as you operate in front of the DVR. If you don't want to show the change to other person, you may choose dialog setup.

①

You can change the setup way and password of the client software.

② Text In Setup : for ATM, cash register and POS setup

If you choose the ‘Dialog’ on ‘Global Setting’, the following screen appears.



①

This updates the preference of DVR.

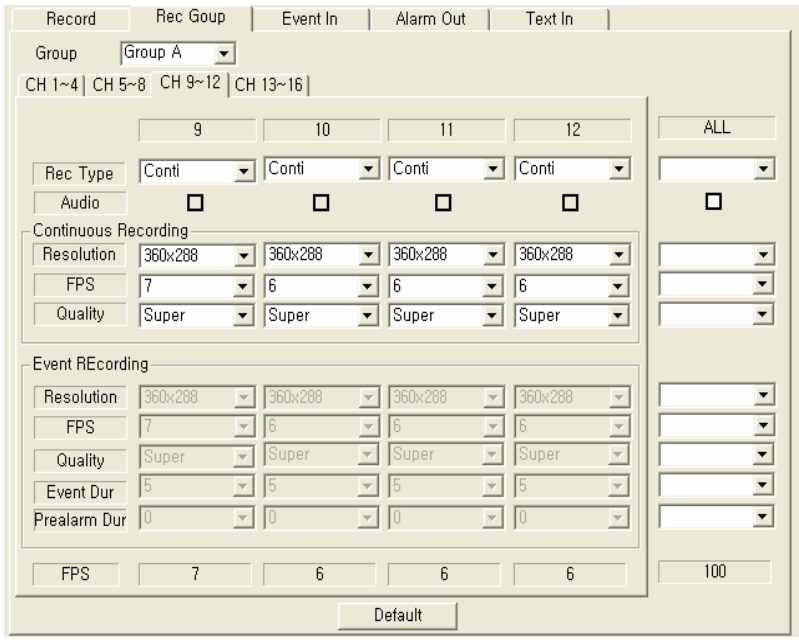
②

This is the Save and Exit the changes.

1) Record Setup

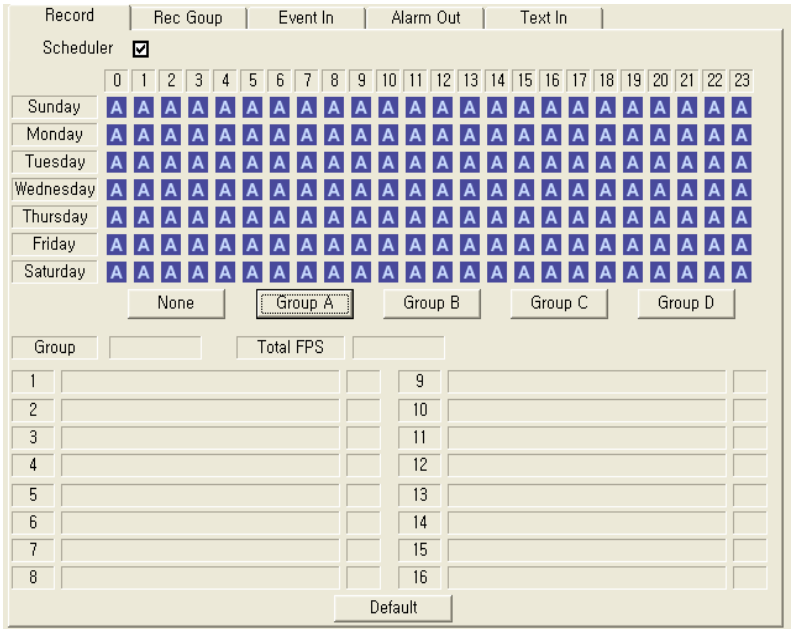
This feature is enable to set the preferences about the continuous and event recording. You can set the recording type, audio, resolution, FPS and quality individually.

.



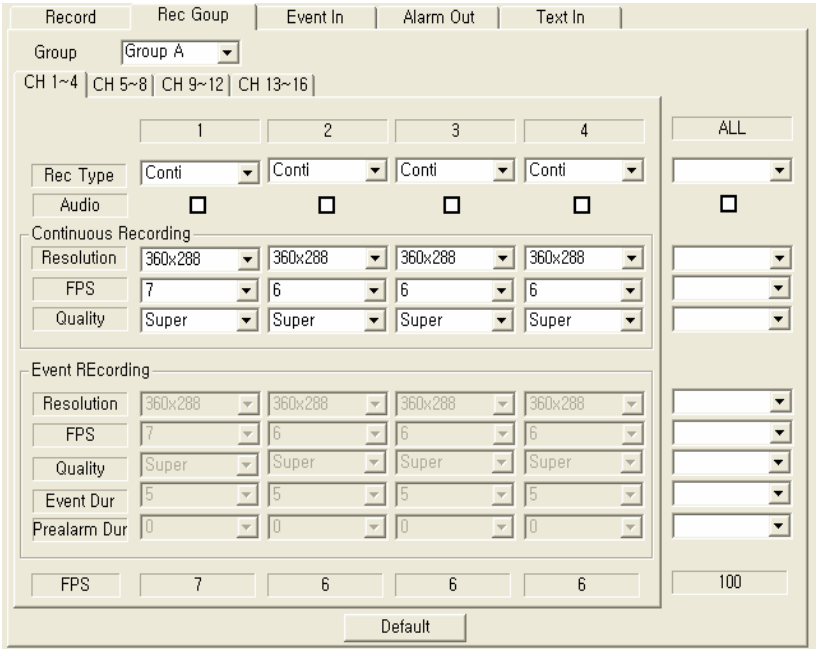
2) Scheduler Setup

If you check the 'Scheduler ☑' , the Scheduler setup screen appear. You can change the weekly scheduler through dragging the mouse. All the information about the group will be shown the lower box.



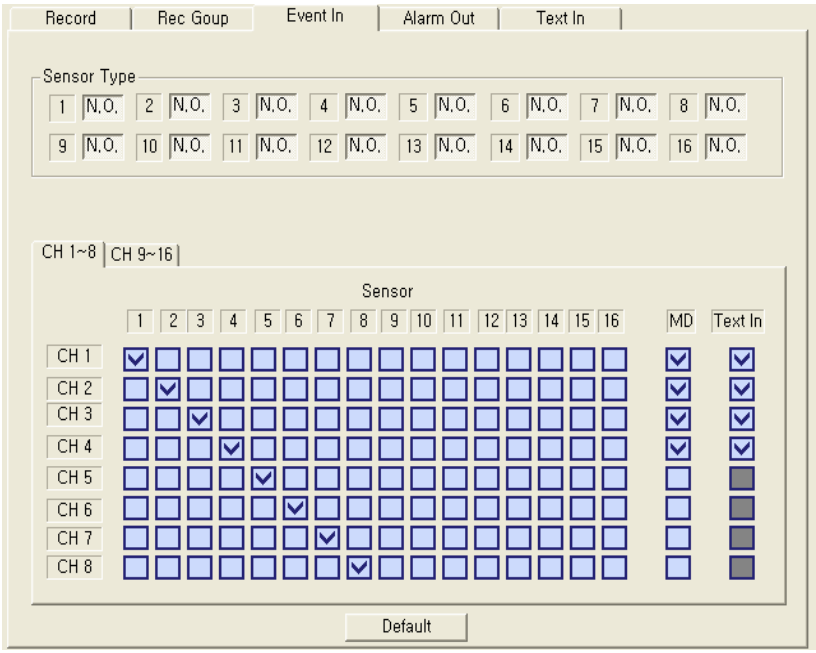
3) Rec Group

You can change the contents of the groups in here.



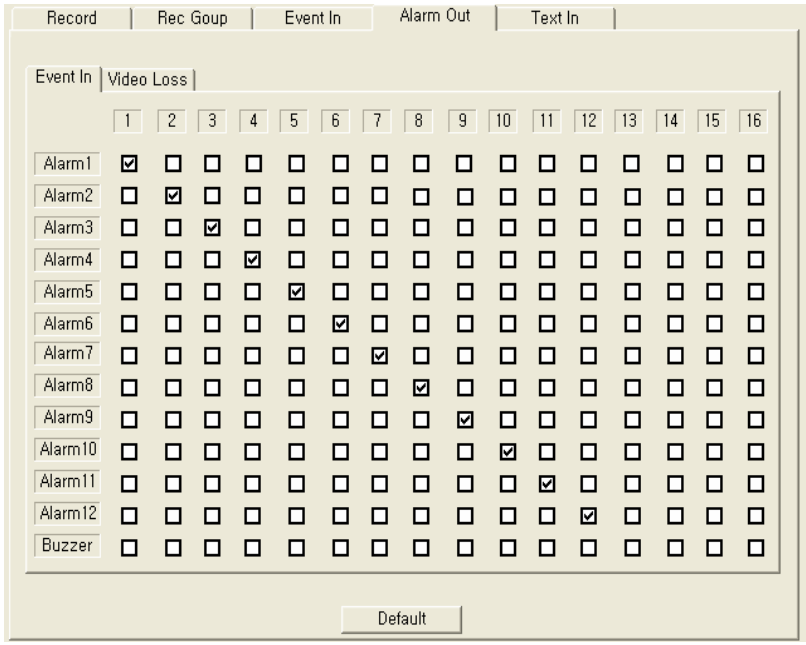
4) Event

You can set the event input such as sensors and motion detection in here.



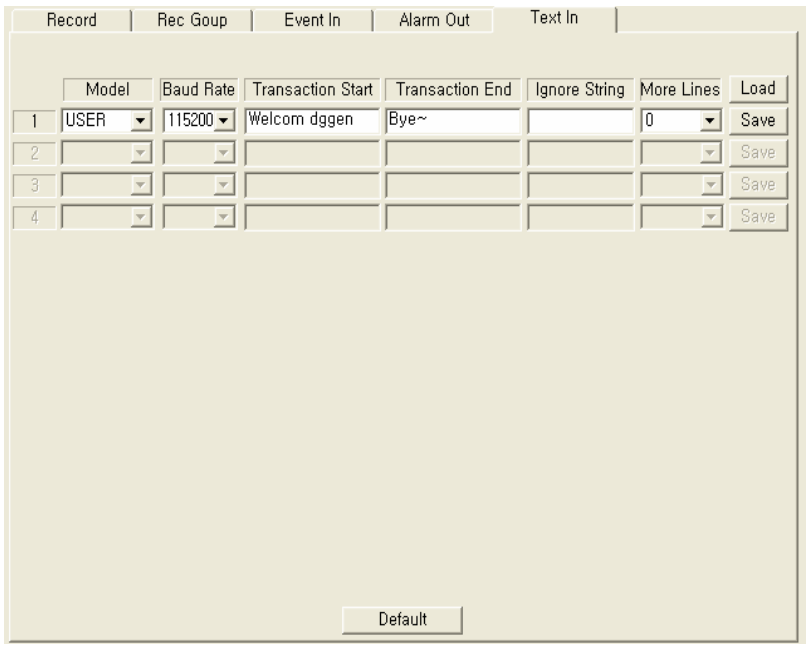
5) Alarm Out

You can set the alarm output regarding the event inputs including video loss in here.



5) Text In

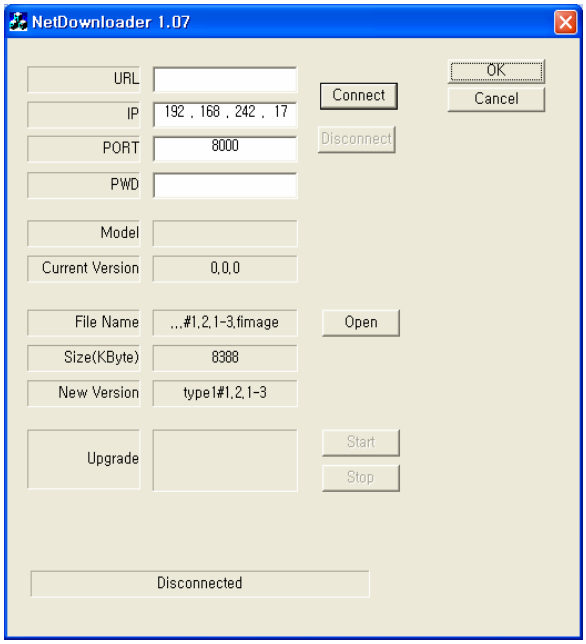
This is setup for ATM, cash register and POS.



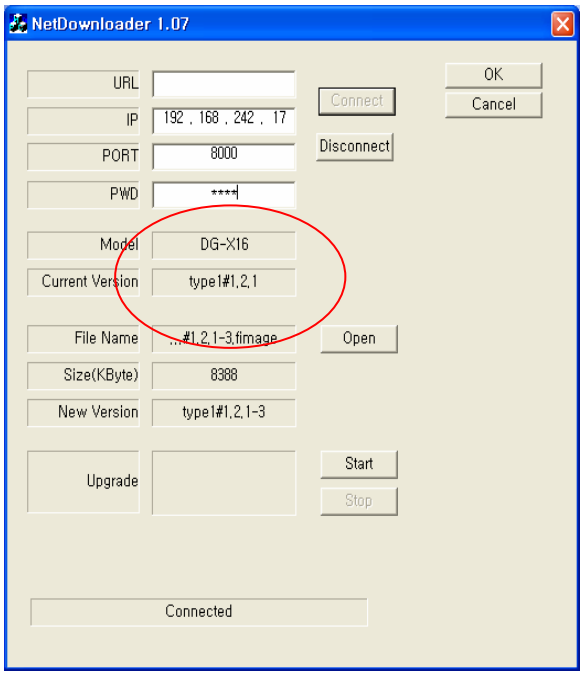
After changing the preferences of the DVR, click the ‘OK’ to preserve the changing.

5-3. Firmware Upgrade

After installing the client software, you can find the 'NetDownloader Program' in the window programs (Start -> programs -> DVR Client -> NetDownLoader) . Please execute this 'Net Downloader Program' to upgrade the firmware of the DVR.



After typing the IP and password of the DVR, click the 'Connect' button. You can check the model name and the current version. If you can't see the model name and current version, you should check the network and try again.



When you connect the DVR, click the ‘open’ button on the ‘NetDownloader Program ’and select the update file and then push the ‘start’ button. You can see the below download window on the DVR screen.

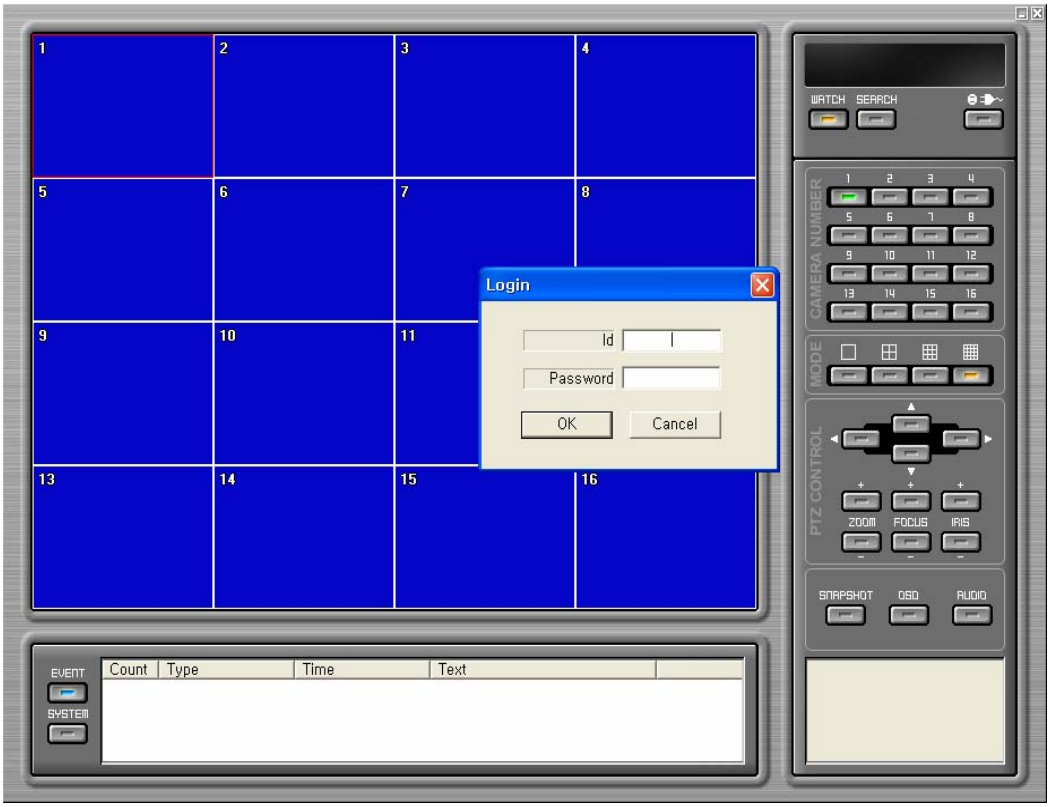
☞ WARNING!!!

If you turn off the power during download, all memory will be deleted. Be careful not to turn it off !

※ After upgrading the DVR reboot automatically. Do not operate manually!

5-4. Web browser Monitoring and Playback

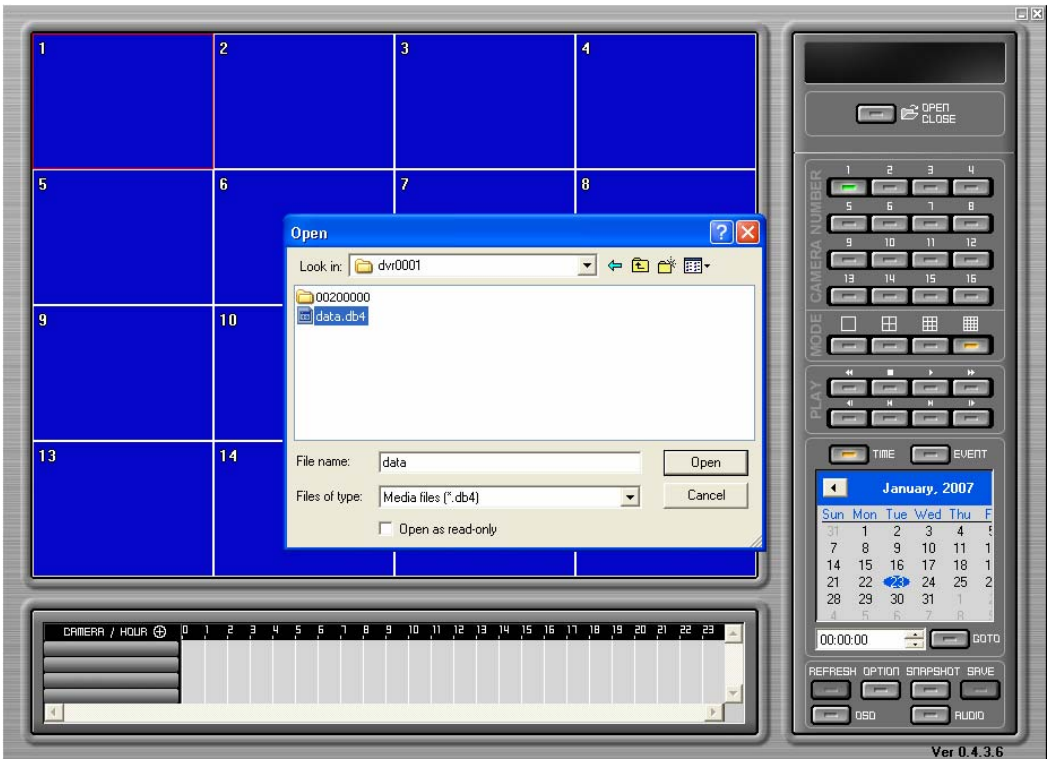
This DVR has built in web server. You can monitor and control the PTZ camera using the web browser. Type the IP or domain address to connect the DVR. Then type the USER ID (admin or user) and the password of the DVR. You can see the live picture to click the ‘connect’ button.



After typing the ID and password, push the ‘connect’ button, then you can see the live screen.
You can use all the same function with client software except ‘Setup’. Refer to the 5-2 and 5-3 .

5-5. Backup Player

After installing the client software, you can find the ‘BachupPlayer’ in the window programs (Start -> programs -> DVR Client -> BackupPlayer) . Please execute this ‘BackupPlayer’ to play with the badkup media such as DVD, CD or USB thumb drive.



After executing the ‘BackupPlayer’, insert the DVD, CD or USB which is backuped from the DVR. After clicking the ‘OPEN and CLOSE’ button, you can search and play the files. The other function is the same as the client search.

Trouble Shooting

Symptom	Checkpoint	Countermeasure
● Can't turn on power	● Is DVR connected to power supply cable?	● Connect power cable
● There is no image on monitor	● Are DVR and monitor turned on? ● Are cables of DVR connected?.	● Turn on power. ● Connect DVR cable.
● Only INFO OSD is on monitor and no image	● Is camera turned on? ● Are cables of DVR and monitor connected?	● Turn on camera. ● Connect cables of DVR and monitor.
● There is Video Loss message.	● Is NTSC/PAL setting normal?	● Check whether NTSC/PAL setting is SETUP properly ● Check whether DVR and camera are connected properly
	● Is connection between DVR and camera normal?	
● Can't search with Client Program.	● Isn't another user using same IP?	● Use it after another use finishes using it. If another user is searching DVR remotely with same IP, you can not search.
		● Increase Motion Detection sensitivity.
●Motion Detection doesn't work well	● Isn't it too bright or too dark?	● Install camera closer.
	● Isn't camera installed too far away? .	
● There are differences between Live screen and actual condition during remote monitoring		● Since it buffers Live images, there might be changes with actual condition. (1~2 sec)
	● Is it set to True Color? ● Are PC specifications and VGA Card specifications are appropriate?	● Refer to recommended Client PC specifications in 4-1 Installing Client Program?
● Live doesn't work well in remote monitoring		

Warranty

This product guarantees free repair based on guarantee regulations only if the malfunction is caused while customers were using it properly.

Warranty Period
Warranty period begins from the day this product is delivered to customer.

Model Name		
Warranty Period	From . . . To . . . (for year)	
User	Address :	
	Company :	
	NAME :	TEL :
Retailer	Address :	
	Company :	
	NAME :	TEL :

In case the malfunction is caused by one of following reasons, repair shall be provided as charged service.

A) If cause for the malfunction is from external condition other than the product
B) If malfunction is cased because user tried to reassemble the product
C) If malfunction is caused by natural disasters such as fire, water disaster, thunder and others
D) If malfunction is caused while transporting or moving the product after purchasing

1. All other refunds other than warranty repair for this product shall be based on actual cost.
2. Refund standard about product repair, exchange or repayment observe Regulations for Compensating Customers' Damage provided by the Economic Planning Board.
3. Repair part providing period is for five years from the day the production for this product stops.

	Address	
	Tel	
	Fax	
	URL	